PAPER – 5 : ADVANCED ACCOUNTING

PART – I: ANNOUNCEMENTS STATING APPLICABILITY & NON-APPLICABILITY FOR NOVEMBER, 2014 EXAMINATION

A. Applicable for November, 2014 examination

(i) Revision in the Criteria for classifying Level II Non-Corporate Entities

Due to recent changes in the enhancement of tax audit limit, the Council of the ICAI has recently decided to change the 1st criteria of Level II Non-Corporate Entities i.e. determination of SME on turnover basis from ₹ 40 lakhs to ₹ 1 Crore vide announcement "Revision in the Criteria for classifying Level II Non-Corporate Entities" issued by ICAI on 7th March, 2013. This revision is applicable with effect from the accounting year commencing on or after April 1, 2012.

(ii) Section 24 of the Banking Regulation Act, 1949 Maintenance of Statutory Liquidity Ratio (SLR) - Local Area Banks

In exercise of the powers conferred by sub-section (2A) of Section 24 of Banking Regulation Act, 1949 (10 of 1949) as amended from time to time, RBI vide notification DBOD.No.Ret.BC.48 /12.02.001/2012-13 dated September 28, 2012 has decided that Statutory Liquidity Ratio for Local Area Banks be reduced from 25 per cent to 23 per cent of their Net Demand and Time Liabilities (NDTL) with effect from the fortnight beginning August 11, 2012.

(iii) Maintenance of Cash Reserve Ratio (CRR)

Reserve Bank of India has decided to reduce the Cash Reserve Ratio (CRR) of Scheduled Commercial Banks by 25 basis points from 4.25 per cent to 4.00 per cent of their Net Demand and Time Liabilities (NDTL) with effect from the fortnight beginning February 09, 2013 vide circular DBOD.No.Ret.BC.76 /12.01.001/2012-13 dated January 29, 2013. The Local Area Banks shall also maintain CRR at 3.00 per cent of its net demand and time liabilities up to February 08, 2013 and 4.00 per cent of its net demand and time liabilities from the fortnight beginning from February 09, 2013.

(iv) Buy Back of Securities (Amendment) Regulations, 2013

In exercise of the powers conferred under section 30 of the Securities and Exchange Board of India Act, 1992 read with clause (f) of sub-section (2) of Section 77A of the Companies Act, 1956 SEBI made Securities and Exchange Board of India (Buy-back of Securities) (Amendment) Regulations, 2013 to amend the Securities and Exchange Board of India (Buy back of Securities) Regulations, 1998. The important provisions of the new regulations are:

(i) No offer of buy-back for fifteen per cent or more of the paid up capital and free reserves of the company shall be made from the open market.

(ii) A company shall not make any offer of buy-back within a period of one year reckoned from the date of closure of the preceding offer of buy-back, if any.

(iii) The company shall ensure that at least fifty per cent of the amount earmarked for buy-back is utilized for buying-back shares or other specified securities.

B. Not applicable for November, 2014 examination

Ind ASs issued by the Ministry of Corporate Affairs

The MCA has hosted on its website 35 converged Indian Accounting Standards (Ind AS) without announcing the applicability date. These are the standards which are being converged by eliminating the differences of the Indian Accounting Standards vis-à-vis IFRS. These Ind ASs are not applicable for the students appearing in November, 2014 Examination.

PART – II : QUESTIONS AND ANSWERS

QUESTIONS

Dissolution of a partnership firm

1. A partnership firm was dissolved on 30th June, 2013. Its Balance Sheet on the date of dissolution was as follows:

Liabilities	₹	₹	Assets	₹
Capitals:			Cash	10,800
A	76,000		Sundry Assets	1,89,200
B	48,000			
C	36,000	1,60,000		
Loan A/c – B		10,000		
Sundry Creditors		30,000		
		2,00,000		2,00,000

The assets were realized in instalments and the payments were made on the basis of highest relative capitals of the partners. Creditors were paid ₹ 29,000 in full settlement of their account. Expenses of realization were estimated to be ₹ 5,400 but actual amount spent was ₹ 4,000. This amount was paid on 15th September. Draw up a statement showing distribution of cash, which was realized as follows:

	₹
On 5th July, 2013	25,200
On 30th August, 2013	60,000
On 15th September, 2013	80,000

The partners shared profits and losses in the ratio of 2 : 2 : 1. Give working notes.

Amalgamation of Partnership Firms

2. Firm B & Co. consists of partners Murli and Honey sharing Profits and Losses in the ratio of 3 : 2. The firm C & Co. consists of partners Honey and Prince sharing Profits and Losses in the ratio of 5 : 3. On 31st March, 2014 it was decided to amalgamate both the firms and form a new firm BC & Co., wherein Murli, Honey and Prince would be partners sharing Profits and Losses in the ratio of 4:5:1.

Balance Sheet as at 31.3.2014

Liabilities	*B & Co.*	*C & Co.*	*Assets*	*B & Co.*	*C & Co.*
	₹	₹		₹	₹
Capital:			Cash in hand/bank	80,000	60,000
Murli	3,00,000	---	Debtors	1,20,000	1,60,000
Honey	2,00,000	1,50,000	Stock	1,00,000	40,000
Prince	---	1,00,000	Vehicles	---	1,80,000
Reserves	1,00,000	80,000	Machinery	2,40,000	---
Creditors	2,40,000	1,10,000	Building	3,00,000	---
	8,40,000	4,40,000		8,40,000	4,40,000

The following were the terms of amalgamation:

(i) Goodwill of B & Co., was valued at ₹ 1,50,000. Goodwill of C & Co. was valued at ₹ 80,000. Goodwill account not to be opened in the books of the new firm but adjusted through the Capital accounts of the partners.

(ii) Building, Machinery and Vehicles are to be taken over at ₹ 4,00,000, ₹ 2,00,000 and ₹ 1,48,000 respectively.

(iii) Provision for doubtful debts ₹ 10,000 in respect of B & Co. and ₹ 8,000 in respect of C & Co. are to be provided.

You are required to:

(i) Show, how the value of Goodwill is to be adjusted amongst the partners.

(ii) Prepare the Balance Sheet of BC & Co. as at 31.3.2014 by keeping partners' capital in their profit sharing ratio by taking capital of 'Honey' as the basis. The excess or deficiency to be kept in the respective Partners' Current accounts.

Conversion of Partnership Firm

3. A and V, sharing profits and losses equally, desired to convert their business into a limited company on 31st December, 2013 when their balance sheet stood as follows:

Liabilities	₹	₹	*Assets*	₹
Sundry creditors		1,92,000	Sundry debtors	2,40,000
Loan creditors		1,60,000	Bills receivable	40,000
Bank overdraft		64,000	Stock in trade	1,44,000
Reserve fund		24,000	Patents	32,000
Capital accounts:			Plant and machinery	64,000
A	1,60,000		Land and building	2,40,000
V	1,60,000	3,20,000		
		7,60,000		7,60,000

(a) The goodwill of the firm was to be valued at two years' purchase of the profits average of the previous three years.

(b) The loan creditor was agreed to accept 7½% redeemable preference shares in settlement of his claim.

(c) Land and buildings and plant and machinery were to be valued at ₹ 4,00,000 and ₹ 96,000 respectively.

(d) The vendors (sundry creditors) were to be allotted equity shares of the value of ₹ 4,20,000.

(e) The past working results of the firm showed that they had made profits of ₹ 1,20,000 in 2011, ₹ 1,44,000 in 2012 and ₹ 1,68,000 in 2013 after setting aside ₹ 8,000 to reserve fund each year.

You are required to show realisation account and partners' capital accounts in the books of the firm assuming that all the transactions are duly completed.

Sale of Partnership firm

4. X and Y were carrying on business sharing profits and losses equally. The firm's Balance Sheet as at 31.12.2013 was as follows:

Liabilities		₹	Assets	₹
Sundry Creditors		1,20,000	Stock	1,20,000
Bank overdraft		70,000	Machinery	3,00,000
Capital A/cs:			Debtors	1,40,000
X	2,80,000		Joint Life Policy	18,000
Y	2,60,000	5,40,000	Leasehold Premises	68,000
			Profit & Loss A/c	52,000
			Drawings Accounts:	

		X	20,000	
		Y	12,000	32,000
	7,30,000			7,30,000

The business was carried on till 30.6.2014. The partners withdrew in equal amounts half the amount of profits made during the period of six months after charging depreciation at 10% p.a. on machinery and after writing off 5% on leasehold premises. In the half year, sundry creditors were reduced by ₹ 20,000 and bank overdraft by ₹ 30,000.

On 30.6.2014, stock was valued at ₹ 1,50,000 and Debtors at ₹ 1,20,000; the Joint Life Policy had been surrendered for ₹ 18,000 before 30.6.2014 and other items remained the same as at 31.12.2013.

On 30.6.2014, the firm sold the business to a Limited Company. The value of goodwill was fixed at ₹ 2,00,000 and the rest of the assets were valued on the basis of the Balance Sheet as at 30.6.2014. The company paid the purchase consideration in Equity Shares of ₹ 10 each.

You are required to prepare: (a) Balance Sheet of the firm as at 30.6.2014; (b) Realisation Account; (c) Partners' Capital Accounts showing the final settlement between them.

Employees Stock Option Plans

5. On 1st April, 2013, a company offered 100 shares to each of its 500 employees at ₹ 50 per share. The employees are given a month to accept the offer. The shares issued under the plan shall be subject to lock-in on transfer for three years from the grant date. The market price of shares of the company on the grant date is ₹ 60 per share. Due to post-vesting restrictions on transfer, the fair value of shares issued under the plan is estimated at ₹ 56 per share.

   On 30th April, 2013, 400 employees accepted the offer and paid ₹ 50 per share purchased. Nominal value of each share is ₹ 10.

   Record the issue of shares in the books of the company under the aforesaid plan.

Buy –back of Shares

6. Umesh Ltd. (a listed company) resolves to buy back 4 lakhs of its fully paid equity shares of ₹ 10 each at ₹ 22 per share from the open market. For the purpose, it issues 1 lakh 11 % preference shares of ₹ 10 each at par, the entire amount being payable with applications. The company uses ₹ 16 lakhs of its balance in Securities Premium Account apart from its adequate balance in General Reserve to fulfill the legal requirements regarding buy-back. Give necessary journal entries to record the above transactions.

Underwriting of Shares

7. Victory Ltd. issued 2,00,000 equity shares and got the entire issue underwritten as follows:

A - 60% shares, B - 25% shares and C - 15% shares.

In addition to the above-mentioned arrangement, there was the following firm underwriting:

A - 10,000 shares, B - 8,000 shares and C - 6,000 shares.

Total subscriptions including firm underwriting were 1,70,000 shares.

Marked applications were as follows:

A - 38,000 shares, B - 40,000 shares and C - 12,000 shares.

The shares underwritten firm were treated as unmarked applications as benefit of firm underwriting is not given to individual underwriters.

Calculate the liability of each one of the underwriters in shares.

Redemption of Debentures

8. Hari Ltd. had issued 20,000, 13% Convertible debentures of ₹ 100 each on 1st April, 2012. The debentures are due for redemption on 1st July, 2014. The terms of issue of debentures provided that they were redeemable at a premium of 5% and also conferred option to the debentureholders to convert 20% of their holding into equity shares (Nominal value ₹ 10) at a price of ₹ 15 per share. Debentureholders holding 2,500 debentures did not exercise the option. Calculate the number of equity shares to be allotted to the Debentureholders exercising the option to the maximum.

Amalgamation of companies

9. L Ltd. and S Ltd. were amalgamated on and from 1st April, 2014. A new company M Ltd. was formed to take over the businesses of the existing companies. The summarized balance sheets of L Ltd. and S Ltd. as on 31st March, 2014 are given below:

(₹ in lakhs)

Equity and Liabilities	*L Ltd.*	*S Ltd.*	*Assets*	*L Ltd.*	*S Ltd.*
Share Capital:					
Equity shares of ₹ 100 each	1,700	1,450	Fixed Assets:		
14% Preference Shares			Land & Building	920	550
of ₹ 100 each	640	350	Plant & Machinery	650	420
Reserves and Surplus:			Investments	150	100
Revaluation reserve	250	160	Current Assets:		
Capital Reserve	600	400			
Investment Allowance	100	60	Inventory	650	538
Reserve			Trade receivables	660	540

P & L Account	30	24	Cash and Bank	770	502
Secured Loans:					
13% Debentures (₹ 100 each)	100	56			
Unsecured Loan:					
Public deposits	50	—			
Current Liabilities and Provisions:					
Trade payables	330	150			
	3,800	2,650		3,800	2,650

Other information

(i) 13% Debenture holders of L Ltd. and S Ltd. are discharged by M Ltd. by issuing such number of its 15% Debentures of ₹ 100 each so as to maintain the same amount of interest.

(ii) Preference Shareholders of the two companies are issued equivalent number of 15% preference shares of M Ltd. at a price of ₹ 125 per share (face value ₹ 100)

(iii) M Ltd. will issue 4 equity shares for each equity share of L Ltd. and 3 equity shares for each equity share of S Ltd. The shares are to be issued @ ₹ 35 each, having a face value of ₹ 10 per share.

(iv) Investment allowance reserve is to be maintained for two more years.

Prepare the balance sheet of M Ltd. as on 1st April, 2014 after the amalgamation has been carried out if amalgamation is in the nature of purchase.

Internal Reconstruction of a Company

10. Following is the summarized Balance Sheet of Ravi Limited as on 31st March, 2014.

Balance Sheet as on 31st March 2014

Liabilities	Amount ₹	Assets	Amount ₹
Authorised and Issued equity share capital:		Patent	4,00,000
30,000 shares of ₹100 each fully paid	30,00,000	Plant & machinery	30,00,000
20,000 7% cumulative preference shares of ₹100 each fully paid	20,00,000	Building	5,50,000
General Reserve	6,00,000	Trade receivables	23,50,000
Loan from Director	4,40,000	Inventory	16,30,000
Trade Payables	24,60,000	Cash	1,20,000

Outstanding expenses	3,20,000	Bank Balance	2,30,000
Proposed dividend	3,00,000	Profit and Loss account	8,40,000
	91,20,000		91,20,000

Note: The arrears of preference dividend amount to ₹ 2,80,000.

The company had suffered losses since last 3 years due to bad market conditions and hope for a better position in the future.

The following scheme of reconstruction has been agreed upon and duly approved by all concerned:

(1) Equity shares to be converted into 3,00,000 shares of ₹10 each.

(2) Equity shareholders to surrender to the company 80 percent of their holdings.

(3) Preference shareholders agree to forgo their right on arrears of dividends in consideration of which 7% preference shares are to be converted into 8% preference shares.

(4) Trade payables agree to reduce their claim by one fourth in consideration of their getting shares of ₹ 5,00,000 out of the surrendered equity shares.

(5) Directors agree to forego the amounts due on account of loan.

(6) Surrendered shares not otherwise utilized to be cancelled.

(7) Assets to be reduced as under:

	₹
Patent by	4,00,000
Plant & Machinery by	4,00,000
Inventory by	3,40,000

(8) Trade receivables to the extent of ₹ 17,00,000 are considered good.

(9) Revalued figures for building is accepted at ₹ 7,00,000.

(10) Proposed dividend is paid to the equity shareholders.

(11) Any surplus after meeting the losses should be utilized in writing down the value of the plant further.

(12) Expenses of reconstruction amounted to ₹ 60,000.

(13) Further 40,000 equity shares were issued to the existing members for increasing the working capital. The issue was fully subscribed and paid up.

You are required to pass the Journal Entries for giving effect to the above arrangement and also to draw up the resultant Balance Sheet of the Company.

Liquidation of a company

11. The following is the Balance Sheet of Om Ltd. which is in the hands of the liquidator:

Balance Sheet as at 31.03.2013

Liabilities	₹	*Assets*	₹
Share Capital:		Fixed assets	4,00,000
2,000 6% Preference Shares of ₹ 100 each fully paid	2,00,000	Inventory	2,40,000
4,000 Equity shares of ₹ 100 each fully paid	4,00,000	Trade Receivables	4,80,000
4,000 Equity shares of ₹ 100 each ₹ 75 paid up	3,00,000	Cash in hand	80,000
Loan from bank (on security of stock)	2,00,000	Profit and loss account	6,00,000
Trade Payables	7,00,000		
	18,00,000		18,00,000

The assets realized the following amounts (after all costs of realization and liquidator's commission amounting to ₹ 10,000 paid out of cash in hand).

	₹
Fixed assets	3,36,000
Inventory	2,20,000
Trade Receivables	4,60,000

Calls on partly paid shares were made but the amounts due on 400 shares were found to be irrecoverable.

Prepare Liquidator's Final Statement of Receipts and Payments.

Financial Statements of Insurance Companies

12. On 31st March, 2014 the books of Shah Insurance Company Limited, contained the following particulars in respect of fire insurance:

Particulars	*Amount ₹*
Reserve for unexpired risks on March 31, 2013	10,00,000
Additional Reserve for unexpired risks on March 31, 2013	2,00,000
Premiums	22,40,000
Claims paid	12,80,000
Estimated liability in respect of outstanding claims:	

On March 31, 2013	1,30,000
On March 31, 2014	1,80,000
Expenses of management (including ₹ 60,000 legal expenses paid in connection with the claims)	5,60,000
Interest and dividend (Gross)	1,28,500
Income tax on the above	13,040
Profit on sale of investments	22,000
Commission paid	3,04,000

On 31st March, 2014 provide ₹ 11,20,000 as unexpired risk reserve and ₹ 1,50,000 as additional reserve.

You are required to prepare the Fire Insurance Revenue account as per the regulations of IRDA, for the year ended 31st March, 2014.

Financial Statements of Banking Companies

13. The following figures have been taken from the books of National Bank Limited as on 31st March, 2014:

	₹
Paid up share capital	10,00,000
Interest and discount received	37,05,500
Interest paid on deposits	20,37,000
Salaries and allowances	2,00,000
Rent and taxes paid	90,000
Directors' fees and allowances	30,000
Statutory reserve fund	8,00,000
Postages and telegrams	60,000
Rent received	65,000
Commission, exchange and brokerage	1,90,000
Profit on sale of investments	2,00,000
Depreciation on bank's property	30,000
Law charges	40,000
Auditors' fees	5,000

The following additional information is given to you :

(i) One customer to whom a sum of ₹ 10 lakhs was advanced, has become insolvent and it is expected that only 50% of the amount will be recovered from his estate.

(ii) Auditors find that a provision of ₹ 1.5 lakhs is necessary against other debts.

(iii) Rebate on bills discounted on 31st March, 2013 was ₹ 12,000 and on 31st March, 2014 was ₹ 16,000.

(iv) Provide ₹ 6,50,000 for income tax.

(v) The Board of Directors decides to declare dividend @ 10% after transfer of 25% of the year's profit to Statutory Reserve.

You are required to prepare Profit and Loss Account of the bank with all the necessary schedules for the year ended 31st March, 2014. Ignore figures for the previous year and corporate dividend tax.

Financial Statements of Electricity Company

14. The trial balance of Veer Electricity Supply Ltd. for the year ended 31st March, 2014 is as below:

		(₹ '000)
Particulars	*Dr.*	*Cr.*
Share Capital :		
30,00,000 Equity Shares of ₹ 10 each		30,000
Patents and trademark	1,000	
14% Debentures		12,000
11% Term Loan		7,000
Land	6,200	
Building	17,000	
Power Plant	30,000	
Electrical Instruments	2,800	
Capital reserve		3,600
Contingency reserves		6,000
Transformers	8,200	
Net revenue account		3,400
Inventories	5,800	
Trade receivables	3,200	
Contingency reserve investments	6,000	
Bank balance	1,200	
Public lamps	1,600	
Depreciation fund		12,000
Trade payables		3,000
Declared dividend		6,000
	83,000	83,000

Prepare Balance Sheet of Veer Electricity Supply Ltd. as on 31st March, 2014.

Departmental Accounts

15. If Ltd. has three departments and submits the following information for the year ending on 31st March, 2014:

	L	M	N	Total (₹)
Purchases (units)	12,000	24,000	28,800	
Purchases (Amount)				12,00,000
Sales (Units)	12,240	23,040	29,952	
Selling Price (₹per unit)	40	45	50	
Closing Stock (Units)	1,200	1,920	72	

You are required to prepare departmental trading account of If Ltd., assuming that the rate of profit on sales is uniform in each case.

Branch Accounting

16. Using the Stock and Debtors system, find out the profit or loss made at the Kolkata Branch in 2014.

	₹
Stock (1st January) invoice price	24,000
Branch Debtors (1st January)	12,400
Goods sent to the Branch (invoice price)	70,000
Goods returned by the Branch (invoice price)	2,000
Sales:	
Credit	42,000
Cash	40,000
Goods returned by customers	1,200
Cash received from debtors	39,600
Discount allowed to them	600
Cash sent for expenses at the Branch	12,200
Shortage of goods at the Branch (invoice price)	800

Goods are invoiced to the Branch at the selling price so as to show a profit of 30% on invoice price.

AS 4

17. (a) A company deals in petroleum products. The sale price of petrol is fixed by the government. After the Balance Sheet date, but before the finalisation of the company's accounts, the government unexpectedly increased the price retrospectively. Can the company account for additional revenue at the close of the year? Discuss in line with provisions of AS 4.

AS 5

(b) The company finds that the inventory sheets of 31.3.2013 did not include two pages containing details of inventory worth ₹ 20 lakhs.

State, how you will deal with the above matter in the accounts of Lemon Ltd. for the year ended 31st March, 2014 with reference to Accounting Standards.

AS 11

18. (a) A company had imported raw materials worth US Dollars 6,00,000 on 5th January, 2014, when the exchange rate was ₹ 43 per US Dollar. The company had recorded the transaction in the books at the above mentioned rate. The payment for the import transaction was made on 5th April, 2014 when the exchange rate was ₹ 47 per US Dollar. However, on 31st March, 2014, the rate of exchange was ₹ 48 per US Dollar. The company passed an entry on 31st March, 2014 adjusting the cost of raw materials consumed for the difference between ₹ 47 and ₹ 43 per US Dollar.

In the background of the relevant accounting standard, is the company's accounting treatment correct? Discuss.

AS 12

(b) S Ltd. received a grant of ₹ 5,000 lakhs during the last accounting year (2012-13) from government for welfare activities to be carried on by the company for its employees. The grant prescribed conditions for its utilization. However, during the year 2013-14, it was found that the conditions of grants were not complied with and the grant had to be refunded to the government in full. Elucidate the correct accounting treatment, with reference to the provisions of AS 12.

AS 16

19. (a) In May, 2013, Victory Ltd. took a bank loan to be used specifically for the construction of a new factory building. The construction was completed in January, 2014 and the building was put to use immediately thereafter. Interest on actual amount used for construction of the building till its completion was ₹ 36 lakhs whereas the total interest paid to the bank on the loan for the period till 31st March, 2014 amounted to ₹ 50 lakhs.

What amount of interest should be capitalized as per Accounting Standard 16 ?

AS 19

(b) Jet Carriers Ltd. has initiated a lease for four years in respect of a vehicle costing ₹ 20,00,000 with expected useful life of 5 years. The asset would revert to the company under the lease agreement. The other information available in respect of lease agreement is:

(1) The unguaranteed residual value of the equipment after the expiry of the lease term is estimated at ₹ 2,50,000.

(2) The implicit rate of interest is 10%.

(3) The annual payments have been determined in such a way that the present value of the lease payment plus the residual value is equal to the cost of asset.

Ascertain in the hand of Jet Carriers Ltd.

(1) The annual lease payment.

(2) The unearned finance income.

(3) The segregation of finance income.

Note: (a) PV Residual value for 4 years @ 10% is 0.683.

(b) PV Factor for 4 years @ 10% is 3.16987.

AS 20

20. (a) Compute Basic and Adjusted Earnings per share from the following information:

Net Profit for 2012-13	₹ 22 lakhs
Net Profit for 2013-14	₹ 33 lakhs
No. of shares before Rights Issue	110,000
Rights issue Ratio	One for Every Four Held
Rights Issue Price	₹ 180
Date of exercising Rights option	31.7.2013 (fully subscribed on this date)
Fair value of share before Rights Issue	₹ 270

All workings may be rounded off to two decimals.

AS 26

(b) A company with a turnover of ₹ 500 crores and an annual advertising budget of ₹ 4 crores had taken up the marketing of a new product. It was estimated that the company would have a turnover of ₹ 50 crores from the new product. The company had debited to its Profit and Loss account the total expenditure of ₹ 4 crore incurred on extensive special initial advertisement campaign for the new product. Is the procedure adopted by the company correct?

SUGGESTED ANSWERS/HINTS

1. Statement showing distribution of cash as per Highest Relative Capital Method

	Creditors	*B's Loan*	*A*	*B*	*C*
2013	*₹*	*₹*	*₹*	*₹*	*₹*
June 30					
Balance b/d	30,000	10,000	76,000	48,000	36,000
Cash balance less provision for					

expenses (₹ 10,800 – ₹ 5,400)	(5,400)	-	-	-	-
Balances unpaid	24,600	10,000	76,000	48,000	36,000
July 5					
1st Instalment of ₹ 25,200	(23,600)	(1,600)	-	-	-
Discount received on full settlement	1,000	8,400	76,000	48,000	36,000
Less: Transferred to Realisation A/c	(1,000)	-	-	-	-
	Nil	8,400	76,000	48,000	36,000
August 30					
2nd instalment of ₹ 60,000 (W.N. 2)		(8,400)	(32,640)	(4,640)	(14,320)
Balance unpaid		Nil	43,360	43,360	21,680
September 15					
Amount realised ₹ 80,000					
Add: Balance out of the Provision for Expenses A/c 1,400					
81,400			(32,560)	(32,560)	(16,280)
Amount unpaid being loss on Realisation in the ratio of 2 : 2 : 1			10,800	10,800	5,400

Working Notes:

1. Cash distribution as per Highest Relative Capital Method

		A	B	C
		₹	₹	₹
1.	Present Capitals	76,000	48,000	36,000
2.	Profit-sharing ratio	2	2	1
3	Capital per unit of Profit share (1 ÷ 2)	38,000	24,000	36,000
4.	Proportionate capitals taking B, whose capital is the least, as the basis	48,000	48,000	24,000
5.	Excess capital (1-4)	28,000	Nil	12,000
	Profit sharing ratio	2		1
6.	Proportionate capitals between A and C taking C's capital as the basis	24,000	-	12,000
7.	Excess of A's Capital (5-6)	4,000	-	-

2. Distribution of Second instalment is

	Creditors	A	B	C
First ₹ 8,400	8,400	-	-	-

Next	₹ 4,000 (2 : 0 : 0)		4,000	-	-
Next	₹ 36,000 (2 : 0 : 1)		24,000	-	12,000
Balance	₹ 11,600 (2 : 2 : 1)		4,640	4,640	2,320
	60,000	8,400	32,640	4,640	14,320

2. (i) Adjustment for raising and writing off of goodwill

	Raised in old profit sharing ratio		Total	Written off in new ratio	Difference
	B & Co.	C & Co.			
	3:2 ₹	5:3 ₹	₹	4:5:1 ₹	₹
Murli	90,000	---	90,000 Cr.	92,000 Dr.	2,000 Dr.
Honey	60,000	50,000	1,10,000 Cr.	1,15,000 Dr.	5,000 Dr.
Prince	---	30,000	30,000 Cr.	23,000 Dr.	7,000 Cr.
	1,50,000	80,000	2,30,000	2,30,000	Nil

(ii) Balance Sheet of BC & Co.(New firm) as on 31.3.2014

Liabilities	₹	*Assets*	₹
Capital Accounts:		Vehicle	1,48,000
Murli	3,44,000	Machinery	2,00,000
Honey	4,30,000	Building	4,00,000
Prince	86,000	Stock	1,40,000
Current Accounts:		Debtors	2,62,000
Murli	44,000	Cash & Bank	1,40,000
Prince	36,000		
Creditors	3,50,000		
	12,90,000		12,90,000

Working Notes:

1. Balance of Capital Accounts at the time of amalgamation of firms

	Murli's Capital ₹	*Honey's Capital* ₹
B & Co.'s Profit and loss sharing ratio 3:2		
Balance as per the Balance Sheet	3,00,000	2,00,000
Add: Reserves	60,000	40,000
Revaluation profit (Building)	60,000	40,000
Less: Revaluation loss (Machinery)	(24,000)	(16,000)
Provision for doubtful debts	(6,000)	(4,000)
	3,90,000	2,60,000

	Honey's Capital	Prince's Capital
C & Co.'s Profit and loss sharing ratio 5:3	₹	₹
Balance as per the Balance sheet	1,50,000	1,00,000
Add: Reserves	50,000	30,000
Less: Revaluation loss (vehicle)	(20,000)	(12,000)
Provision for doubtful debts	(5,000)	(3,000)
	1,75,000	1,15,000

2. Balance of Capital Accounts in the balance sheet of the new firm as on 31.3.2014

	Murli ₹	Honey ₹	Prince ₹
Balance b/d: B & Co.	3,90,000	2,60,000	--
C & Co.	--	1,75,000	1,15,000
	3,90,000	4,35,000	1,15,000
Adjustment for goodwill	(2,000)	(5,000)	7,000
	3,88,000	4,30,000	1,22,000
Total capital ₹8,60,000 (Taking Honey's capital* as base i.e. ₹4,30,000 x 10/5) to be contributed in 4:5:1 ratio.	3,44,000	4,30,000	86,000
Transfer to Current Account	44,000	---	36,000

3. Books of A and V

Realisation Account

	₹	₹		₹
To Sundry debtors		2,40,000	By Sundry creditors	1,92,000
To Bills receivable		40,000	By Loan creditors	1,60,000
To Stock in trade		1,44,000	By Bank overdraft	64,000
To Patents		32,000	By Purchasing Company	8,40,000
To Plant and Machinery		64,000	(W.N. 2)	
To Land and Building		2,40,000		
To Capital A/c (Profit)				
A	2,48,000			
V	2,48,000	4,96,000		
		12,56,000		12,56,000

* Honey's Capital ₹ 4,30,000 being one-half of the total capital of the firm.

Partners' Capital Accounts

	A	V		A	V
	₹	₹		₹	₹
To Shares in Purchasing Co.	4,20,000	4,20,000	By Balance b/d	1,60,000	1,60,000
			By Reserves	12,000	12,000
			By Realization A/c	2,48,000	2,48,000
	4,20,000	4,20,000		4,20,000	4,20,000

Working Notes:

1. Goodwill = (1,20,000 + 1,44,000 + 1,68,000 + 24,000*)/3 x 2 Years = 3,04,000

   * Profit transferred to reserve @ ₹ 8,000 for 3 years.

2. Calculation of Purchase Consideration

	₹	₹
Assets taken over:		
Goodwill (W.N.1)		3,04,000
Land and Buildings		4,00,000
Plant and Machinery		96,000
Debtors		2,40,000
Bills Receivable		40,000
Stocks		1,44,000
Patents		32,000
		12,56,000
Less: Liabilities taken over:		
Creditors	1,92,000	
Loan Creditors	1,60,000	
Bank Overdraft	64,000	4,16,000
Purchase Consideration		8,40,000

4. (a) Balance Sheet of the firm as on 30.6.2014

Liabilities	₹	₹	Assets	₹	₹
Capital Accounts:			Machinery	3,00,000	
X's balance as on 1.1.2014	2,34,000		Less: Depreciation @10% p.a.	(15,000)	2,85,000
Add: Profit for 6 months	23,600		Leasehold premises	68,000	
	2,57,600		Less: Written-off @ 5%	(3,400)	64,600
Less: Drawings for 6 months	(11,800)	2,45,800	Stock		1,50,000

Y's balance as on 1.1.2014	2,22,000		Sundry Debtors		1,20,000
Add: Profit for 6 months	23,600				
	2,45,600				
Less: Drawings for 6 months	(11,800)	2,33,800			
Sundry Creditors		1,00,000			
Bank overdraft		40,000			
		6,19,600			6,19,600

(b) **Realisation Account**

	Particulars	₹		Particulars	₹
To	Machinery A/c	2,85,000	By	Sundry Creditors A/c	1,00,000
To	Leasehold Premises A/c	64,600	By	Bank Overdraft A/c	40,000
To	Stock A/c	1,50,000	By	Limited Company A/c (W.N.2)	6,79,600
To	Sundry Debtors A/c	1,20,000			
To	X's Capital A/c	1,00,000			
To	Y's Capital A/c	1,00,000			
		8,19,600			8,19,600

(c) **Partners' Capital Accounts**

Date	Particulars	X	Y	Date	Particulars	X	Y
		₹	₹			₹	₹
1.1.14	To Profit & Loss A/c	26,000	26,000	1.1.14	By Balance b/d	2,80,000	2,60,000
	To Drawings A/c	20,000	12,000				
29.6.14	To Balance c/d	2,34,000	2,22,000				
		2,80,000	2,60,000			2,80,000	2,60,000
30.6.14	To Drawings A/c	11,800	11,800	30.6.14	By Balance b/d	2,34,000	2,22,000
	To Shares in Limited Company A/c	3,45,800	3,33,800	30.6.14	By Profit & Loss Appropriation A/c	23,600	23,600
					By Realisation A/c	1,00,000	1,00,000
		3,57,600	3,45,600			3,57,600	3,45,600

Working Notes:

(1) Ascertainment of profit for the 6 months ended 30th June, 2014

	₹	₹
Closing Assets:		
Stock		1,50,000
Sundry Debtors		1,20,000
Machinery less depreciation		2,85,000
Leasehold premises less written off		64,600
		6,19,600
Less: Closing liabilities:		
Sundry Creditors	1,00,000	
Bank overdraft	40,000	(140,000)
Closing Net Assets		4,79,600
Less: Opening combined capital:		
X – ₹ (2,80,000 – 26,000 – 20,000)	2,34,000	
Y – ₹ (2,60,000 – 26,000 – 12,000)	2,22,000	(4,56,000)
Profit before adjustment of drawings		23,600
Add: Combined drawings during the 6 months (equal to profit)		23,600
Profit for 6 months		47,200

(2) Ascertainment of purchase consideration:

Closing net assets (as above) ₹ 4,79,600 + Goodwill ₹ 2,00,000 = ₹ 6,79,600.

5. Fair value of an option = ₹ 56 – ₹ 50 = ₹ 6

Number of shares issued = 400 employees x 100 shares/employee = 40,000 shares

Fair value of ESPP = 40,000 shares x ₹ 6 = ₹ 2,40,000

Vesting period = 1 month

Expenses recognized in 2013-14 = ₹ 2,40,000

Date	*Particulars*		₹	₹
30.04.2013	Bank (40,000 shares x ₹ 50)	Dr.	20,00,000	
	Employees compensation expenses A/c	Dr.	2,40,000	
	To Share Capital (40,000 shares x ₹10)			4,00,000
	To Securities Premium (40,000 shares x ₹ 46)			18,40,000
	(Being option accepted by 400 employees & payment made @ ₹ 56 per share)			

6. Journal Entries

			₹	₹
1.	Bank A/c	Dr.	10,00,000	
	To 11% Preference share application & allotment A/c			10,00,000
	(Being receipt of application money on preference shares)			
2.	11% Preference share application & allotment A/c	Dr.	10,00,000	
	To 11% Preference Share Capital A/c			10,00,000
	(Being allotment of 1 lakh preference shares)			
3.	Securities Premium A/c	Dr.	16,00,000	
	General Reserve A/c	Dr.	14,00,000	
	To Capital Redemption Reserve A/c			30,00,000
	(Being creation of capital redemption reserve for buy-back of shares)			
4.	Equity share capital A/c	Dr.	40,00,000	
	General Reserve A/c	Dr.	48,00,000	
	To Equity shareholders/Equity Shares buy back A/c			88,00,000
	(Amount payable to equity shareholders on buy- back)			
5.	Equity shareholders/ Equity Shares buy-back A/c	Dr.	88,00,000	
	To Bank A/c			88,00,000
	(Being payment made for buy-back of shares)			

Working Note:

Amount to be transferred to Capital Redemption Reserve account

	₹
Nominal value of shares bought back (4,00,000 shares x ₹10)	40,00,000
Less: Nominal value of Preference Shares issued for such buy-back (1,00,000 shares x ₹10)	(10,00,000)
Amount transferred to Capital Redemption Reserve Account	30,00,000

Note: It is assumed that the buy-back of 4,00,000 equity shares from open market is within the prescribed 15% limit of total equity shares as per the SEBI Regulations

7. Statement showing liability of underwriters when benefit of firm underwriting is not given

				(In shares)
	A	B	C	Total
Gross liability	1,20,000	50,000	30,000	2,00,000
Less : Marked applications	(38,000)	(40,000)	(12,000)	(90,000)
	82,000	10,000	18,000	1,10,000
Less: Unmarked applications in gross liability ratio (Refer W.N.)	(48,000)	(20,000)	(12,000)	(80,000)
	34,000	(10,000)	6,000	30,000
Excess of B distributed to A and C in the ratio of 4:1	(8,000)	10,000	(2,000)	-
	26,000	-	4,000	30,000
Add: Firm underwriting	10,000	8,000	6,000	24,000
Final/Total liability of the underwriters	36,000	8,000	10,000	54,000

Working Note:

Calculation of Number of unmarked applications

	In shares
Total subscription (excluding firm underwriting) 1,70,000-24,000	1,46,000
Less: Marked application (excluding firm underwriting)	(90,000)
Unmarked application by public	56,000
Add: Application under firm underwriting	24,000
Total unmarked application	80,000

8. Calculation of number of equity shares to be allotted

	Number of debentures
Total number of debentures	20,000
Less: Debenture holders not opted for conversion	(2,500)
Debenture holders opted for conversion	17,500
Option for conversion	20%
Number of debentures to be converted (20% of 17,500)	3,500

Redemption value of 3,500 debentures at a premium of 5% [3,500 x (100+5)]	₹ 3,67,500
Equity shares of ₹10 each issued on conversion [₹ 3,67,500/ ₹15]	24,500 shares

9. Para 3 (g) of AS 14 defines the term 'consideration' as the value of shares, other securities and any payment made in the form of cash or other assets by the transferee company to the shareholders of transferor company. Therefore, payments made to debenture holders should not be construed as part of consideration.

Computation of Purchase consideration (Payment Basis)

		(₹ in lakhs)	
		L Ltd.	*S Ltd.*
(1)	Preference Shareholders:		
	6,40,000 shares @ ₹ 125 each	800.00	
	3,50,000 shares @ ₹ 125 each		437.50
(2)	Equity Shareholders:		
	(4 × 17,00,000) = 68,00,000 equity shares @ ₹ 35 each	2,380.00	
	(3 × 14,50,000) = 43,50,000 equity shares @ ₹ 35 each		1,522.5
		3,180.00	1,960

Amalgamation in the nature of Purchase:

Balance Sheet of M Ltd.

As on 1st April, 2014

Particulars	*Note No.*	*(₹ in lakhs)*
I. Equity and Liabilities		
(1) Shareholder's Funds		
(a) Share Capital	1	2,105.00
(b) Reserves and Surplus	2	3,839.80
(2) Non-Current Liabilities		
Long-term borrowings	3	185.20
(3) Current Liabilities		
(a) Trade payables	4	480.00
Total		6,610.00
II. Assets		
(1) Non-current assets		
(a) Fixed assets		
Tangible assets	5	2,540.00
(b) Non-current Investments (150+ 100)		250.00
(c) Other non current assets	6	160.00
(2) Current assets		
(a) Inventories (650 + 538)		1,188.00
(b) Trade Receivables	7	1,200.00
(c) Cash & Cash equivalents (770 +502)		1,272.00
Total		6,610.00

Notes to Accounts

		(₹ in lakhs)	(₹ in lakhs)
1.	Share Capital		
	11,150,000 Equity Shares of ₹ 10 each	1115.00	
	9,90,000 15% Preference shares of 100 each	990.00	2,105
2.	Reserves and surplus		
	Capital Reserve (WN 1)	644.8	
	Securities Premium	3,035	
	Investment Allowance Reserve (100 + 60)	160.00	3839.8
3.	Long Term Borrowings		
	15% Debentures	135.2	
	Public Deposit	50.00	185.2
4.	Trade payables		
	L Ltd.	330	
	S Ltd.	150	480.00
5.	Tangible assets		
	Land & Building	1,470.00	
	Plant & Machinery	1,070.00	2,540.00
6	Other Non Current assets		
	Amalgamation Adjustment Account (100 + 60)		160.00
7.	Trade Receivables		
	L Ltd.	660	
	S Ltd.	540	1,200.00

Working Note

	(₹ in lakhs)			
		L Ltd.		S Ltd.
Assets taken over:				
Land and Building		920		550
Plant and Machinery		650		420
Investments		150		100
Inventory		650		538
Trade receivables		660		540
Cash and Bank		770		502
		3,800		2,650
Less : Liabilities taken over:				
13% Debentures	86.66		48.54	

Public Deposits	50		—	
Trade payables	330	(466.66)	150	(198.54)
Net Assets taken over		3,333.34		2,451.46
Less : Purchase consideration		(3,180)		(1,960)
Capital Reserves		153.34		491.46

10. Books of Ravi Ltd.

Journal Entries

Particulars		Debit (₹)	Credit (₹)
Equity Share Capital (₹ 100 each) a/c	Dr	30,00,000	
To Equity share capital (₹ 10 each) A/c			30,00,000
(Sub division of equity share into ₹ 10 each)			
Equity Share Capital (₹10) A/c	Dr.	24,00,000	
To Share surrendered A/c			24,00,000
(Surrender of 80% of share holding by equity share holders)			
7% Cumulative preference share capital A/c	Dr.	20,00,000	
To 8% cumulative preference share capital A/c			20,00,000
(Conversion of 7% Cumulative Preference share capital into 8% Cumulative Preference share capital. They also forgo their right to arrears of dividends)			
Shares Surrendered A/c	Dr.	5,00,000	
To Equity share capital A/c			5,00,000
(Surrendered share issued against trade payables under reconstruction scheme)			
Proposed dividend A/c	Dr.	3,00,000	
Expenses of reconstruction A/c	Dr.	60,000	
To Bank A/c			3,60,000
(Proposed dividend to Equity Share holder's and reconstruction expenses paid)			
Share surrendered A/c	Dr.	19,00,000	
To capital Reduction A/c			19,00,000
(Cancellation of unissued surrendered shares) (24,00,000-5,00,000)			
Loan from Director A/c	Dr.	4,40,000	

Trade Payables A/c	Dr.	6,15,000	
Building A/c	Dr.	1,50,000	
To Capital reduction A/c			12,05,000
(Amount sacrificed by directors and trade payables and appreciation in value of building)			
Capital reduction A/c	Dr.	31,05,000	
To Patent A/c			4,00,000
To Trade receivables A/c			6,50,000
To Inventory A/c			3,40,000
To Profit and Loss A/c			8,40,000
To Expenses on Reconstruction A/c			60,000
To Plant A/c (bal. fig)			8,15,000
(Various assets and expenses written off)			
Bank A/c	Dr.	4,00,000	
To Share application money A/c			4,00,000
(Application money received on full and final payment)			
Share application money A/c	Dr.	4,00,000	
To Share capital A/c			4,00,000
(Being 40,000 equity shares of ₹ 10 each issued and fully paid up)			

Note: Cancellation of preference dividend need not be journalised. On cancellation, it ceases to be contingent liability and hence no further disclosure required.

Balance Sheet of Ravi Ltd. (and Reduced) as at 31st March, 2014

	Particulars	Note	Amount (₹)
I.	EQUITY AND LIABILITIES		
	1. Shareholders' funds		
	a. Share capital	1	35,00 000
	b. General reserve		6,00 000
	2. Current liabilities		
	a. Trade payables (24,60,000-6,15,000)		18,45,000
	b. Other current liabilities (outstanding expenses)		3,20,000
	Total		62,65,000

II.	ASSETS		
	1. Non-current assets		
	Fixed assets		
	i. Tangible assets	2	28,85,000
	ii. Intangible assets	3	-
	2. Current assets		
	a. Inventories (16,30,000- 3,40,000)		12,90,000
	b. Trade receivables (23,50,000- 6,50,000)		17,00,000
	c. Cash and cash equivalents	4	3,90,000
	Total		62,65,000

Notes to the financial statements

(1) Share capital

	Particulars	Amount (₹)
a.	Authorised	
	• 3,00,000 equity shares of ₹10 each	30,00,000
	• 20,000 8% cumulative preference shares of ₹100 each	20,00,000
b.	Issued, subscribed and fully paid up	
	• 1,50,000 equity shares of ₹10 each (of the above, 50,000 shares were issued as fully paid up for consideration other than cash under the scheme of reconstruction)	15,00,000
	• 20,000 8% cumulative preference shares of ₹100 each	20,00,000
	Total	35,00,000

(2) Tangible assets

Particulars	₹
Plant (30,00,000-8,15,000)	21,85,000
Building (5,50,000 + 1,50,000)	7,00,000
Total	28,85,000

(3) Intangible assets

Particulars	₹
Patent (4,00,000-4,00,000)	-

(4) Cash and cash equivalents

	Particulars	₹
a.	Balance with bank (2,30,000-3,00,000-60,000+4,00,000)	2,70,000
b.	Cash on hand	1,20,000
	Total	3,90,000

11. Liquidator's Final Statement of Receipts and Payments A/c

	₹	₹		₹
To Cash in hand		80,000	By Liquidator's remuneration and expenses	10,000
To Assets realised:			By Trade payables	7,00,000
Fixed assets	3,36,000		By Preference shareholders	2,00,000
Inventory			By Equity shareholders @ ₹ 10 on	40,000
(2,20,000 – 2,00,000)	20,000		4,000 shares	
Trade receivables	4,60,000	8,16,000		
To Cash - proceeds of call on 3,600 equity shares @ ₹ 15		54,000		
		9,50,000		9,50,000

Working Note:

Return per equity share

	₹
Cash available before paying preference shareholders (₹ 8,96,000 – ₹ 7,10,000)	1,86,000
Add: Notional calls 3,600 shares (4,000-400) × ₹ 25	90,000
	2,76,000
Less: Preference share capital	(2,00,000)
Available for equity shareholders	76,000
Return per share = 76,000/ [7,600(8,000- 400)] = ₹ 10	
and Loss per Equity Share ₹ (100-10) = ₹ 90	

Calls to be made @ ₹ 15 per share (₹ 90-75) on 3,600 shares.

12. FORM B– RA

Name of the Insurer: Shah Insurance Company Limited

Registration No. and Date of registration with IRDA: ……………………..

Revenue Account for the year ended 31st March, 2014

Particulars	*Schedule*	*Amount (₹)*
Premium earned (net)	1	21,70,000
Profit or loss on sale/redemption of investment		22,000
Others		-
Interest dividend & rent (Gross)		1,28,500
Total (A)		23,20,500
Claim incurred (Net)	2	13,90,000
Commission	3	3,04,000
Operating expenses related to insurance	4	5,00,000
Total (B)		21,94,000
Operating profit/loss from fire insurance business		1,26,500
Schedule –1 (Premium earned net)		₹
Premium received		22,40,000
Less: Adjustment for change in Reserve for Unexpired risk (as per W.N.)		70,000
Total premium earned		21,70,000
Schedule -2 (Claims incurred net)		
Claim paid		12,80,000
Add: Legal expenses regarding claims		60,000
		13,40,000
Add: Claims outstanding as on 31st March 2014		1,80,000
		15,20,000
Less: Claims outstanding as on 31st March 2013		1,30,000
		13,90,000
Schedule-3 (Commission)		
Commission paid		3,04,000
Schedule-4 (Operating expenses related to Insurance Business)		-
Expenses of management (5,60,000 – 60,000)		5,00,000

Working Note:

Calculation for change in Reserve for Unexpired risk:		₹
As on 31st March, 2014:		
Reserve for Unexpired Risk	11,20,000	
Additional Reserve	1,50,000	12,70,000
Less: Reserve for Unexpired risks as on 31st March, 2013	10,00,000	
Additional reserve as on 31st March, 2013	2,00,000	(12,00,000)
		70,000

Note: Interest and dividends are shown at gross value in Revenue A/c. Income tax on the above will not be included in Revenue A/c of an insurance company as it is the part of Profit and Loss A/c.

13. National Bank Limited

Profit and Loss account for the year ended 31st March, 2014

		Schedule No.	Year ended 31.3.2014
			₹
I.	Income		
	Interest earned	13	37,01,500
	Other income	14	4,55,000
			41,56,500
II.	Expenditure		
	Interest expended	15	20,37,000
	Operating expenses	16	4,55,000
	Provisions and contingencies (W.N.2)		13,00,000
			37,92,000
III.	Profit		
	Net profit for the year		3,64,500
	Profit brought forward		-
			3,64,500
IV.	Appropriations		
	Transfer to Statutory Reserve		91,125
	Proposed dividend		1,00,000
	Balance carried over to balance sheet		1,73,375
			3,64,500

Schedule 13 – Interest earned

	₹
Interest and discount earned (W.N.1)	37,01,500
	37,01,500

Schedule 14 - Other Income

	₹
Commission, exchange and brokerage	1,90,000
Profit on sale of investment	2,00,000
Rent	65,000
	4,55,000

Schedule 15-Interest Expended

	₹
Interest paid on deposits	20,37,000
	20,37,000

Schedule 16-Operating Expenses

	₹
Payment and provisions for employees	2,00,000
Rent and taxes paid	90,000
Depreciation on bank's property	30,000
Directors' fees and allowances	30,000
Auditors' fees	5,000
Law charges	40,000
Postage and Telegrams	60,000
	4,55,000

Working Notes:

		₹
1.	**Calculation of interest earned**	
	Interest and discount received	37,05,500
	Add: Rebate on bills discounted as on 31st March, 2013	12,000
		37,17,500
	Less: Rebate on bills discounted as on 31st March, 2014	(16,000)
		37,01,500

2.	Provisions and Contingencies		
	Provision for doubtful debts:		
	Doubtful debts due to insolvency of a customer (50% of ₹ 10 lakhs)	5,00,000	
	Provision for other debts	1,50,000	6,50,000
	Provision for income tax		6,50,000
			13,00,000

14. Balance Sheet of Veer Electricity Supply Ltd. as on March 31, 2014

			Particulars	Note No.	₹ ('000)
			Equity and Liabilities		
1			Shareholders' funds		
	a		Share capital	1	30,000
	b		Reserves and Surplus	2	13,000
2			Non-current liabilities		
	a		Long-term borrowings	3	19,000
3			Current liabilities		-
	a		Trade Payables		3,000
	b		Other current liabilities	4	6,000
			Total		71,000
			Assets		-
1			Non-current assets		-
	a		Fixed assets		-
		i	Tangible assets	5	53,800
		ii	Intangible assets		1,000
	b		Other non-current assets	6	6,000
2			Current assets		-
	a		Inventories		5,800
	b		Trade receivables		3,200
	c		Cash and cash equivalents		1,200
			Total		71,000

Notes to financial statements

			₹ ('000)
1	Share Capital		
	Issued & subscribed		
	Equity share capital		
	30,00,000 Equity shares of ₹ 10 each		30,000

2	Reserves and Surplus		
	Capital reserve		3,600
	Contingency Reserve		6,000
	Balance of net revenue account		3,400
			13,000
3	Long-term borrowings		
	Secured		
	14% Debentures		12,000
	11% Term Loan (considered secured)		7,000
			19,000
4	Other Current liabilities		
	Declared dividend		6,000
			6,000
5	Tangible assets		
	Land		6,200
	Building		17,000
	Plant & Machinery		
	Power Plant	30,000	
	Transformers	8,200	
	Public Lamps	1,600	39,800
	Electrical Instruments		2,800
			65,800
	Less: Depreciation fund		(12,000)
			53,800
6	Other non-current assets		
	Contingency Reserve Investment (assumed as non-current item)		6,000

15. **Departmental Trading Account for the year ended on 31st March, 2014**

Particulars	L	M	N	Particulars	L	M	N
	₹	₹	₹		₹	₹	₹
To Opening Stock	23,040	17,280	24,480	By Sales	4,89,600	10,36,800	14,97,600
To Purchases	1,92,000	4,32,000	5,76,000	By Closing Stock	19,200	34,560	1,440
To Gross Profit	2,93,760	6,22,080	8,98,560				
	5,08,800	1,07,1360	14,99,040		5,08,800	10,71,360	14,99,040

Working Notes:

(1)

Profit Margin Ratio	₹
Selling price of unit purchased:	
Department L (12,000 x 40)	4,80,000
Department M (24,000 x 45)	10,80,000
Department N (28,800 x 50)	<u>14,40,000</u>
Total Selling Price	30,00,000
Less: Purchase (Cost) Value	<u>12,00,000</u>
Gross Profit	<u>18,00,000</u>
Profit Margin Ratio = = (18,00,000/ 30,00,000) x 100 = 60%	

(2) **Statement showing department-wise per unit Cost and Purchase Cost**

	L	M	N
Selling Price (Per unit) (₹)	40	45	50
Less: Profit Margin @ 60% (₹)	<u>24</u>	<u>27</u>	<u>30</u>
Purchase price per unit (₹)	<u>16</u>	<u>18</u>	<u>20</u>
Number of units purchased	12,000	24,000	28,800
Purchases (cost per unit x Units purchased)	1,92,000	4,32,000	5,76,000

(3) **Statement showing calculation of department-wise Opening Stock (in Units)**

	L	M	N
Sales (Units)	12,240	23,040	29,952
Add: Closing Stock (Units)	<u>1,200</u>	<u>1,920</u>	<u>72</u>
	13,440	24,960	30,024
Less: Purchases (units)	<u>12,000</u>	<u>24,000</u>	<u>28,800</u>
Opening Stock (Units)	1,440	960	1,224

(4) **Statement showing department-wise cost of Opening Stock and Closing Stock**

	L	M	N
Cost of Opening Stock (₹)	(1,440 x 16)	(960 x 18)	(1,224 x 20)
₹	23,040	17,280	24,480
Cost of Closing Stock	(1,200 x 16)	(1,920 x 18)	(72 x 20)
₹	19,200	34,560	1,440

16. Branch Stock Account

Particulars	₹	Particulars	₹
To Balance b/d	24,000	By Cash A/c (Cash sales)	40,000
To Goods sent to Branch A/c	70,000	By Branch Debtors (credit sales)	42,000
To Branch Debtors (Sales Returns)	1,200	By Goods sent to Branch A/c (Returns)	2,000
		By Shortage of goods	800
		By Balance c/d (Bal. fig.)	10,400
	95,200		95,200

Branch Debtors Account

Particulars	₹	Particulars	₹
To Balance b/d	12,400	By Branch stock A/c (Sales Returns)	1,200
To Branch Stock (Credit sales)	42,000	By Cash A/c	39,600
		By Discount A/c	600
		By Balance c/d (Bal. fig.)	13,000
	54,400		54,400

Branch Expenses Account

Particulars	₹	Particulars	₹
To Cash A/c	12,200	By Branch P&L A/c (Bal. fig.)	12,800
To Discount A/c	600		
	12,800		12,800

Goods Sent to Branch Account

Particulars	₹	Particulars	₹
To Branch Stock A/c (Returns)	2,000	By Branch Stock A/c	70,000
To Branch Adjustment A/c (Loading) (70,000× 30%)	21,000	By Branch Adj. A/c (Loading) (2,000 × 30%)	600
To Trading A/c (Bal. fig.)	47,600		
	70,600		70,600

Branch Adjustment Account

Particulars	₹	Particulars	₹
To Shortage of goods (Loading) (800 × 30%)	240	By Branch Stock Reserve (24,000 × 30%)	7,200
To Branch Stock Reserve A/c (10,400 × 30%)	3,120	By Goods sent to Branch (Net loading) (21,000 – 600)	20,400
To P&L A/c (Bal. fig.)	24,240		
	27,600		27,600

Branch Profit and Loss Account			
Particulars	₹	*Particulars*	₹
To Branch Expenses A/c	12,800	By Branch Adjustment A/c	24,240
To Shortage of Goods (cost) (800 × 70%)	560		
To Net Profit	10,880		
	24,240		24,240

17. (a) According to para 8 of AS 4, the unexpected increase in sale price of petrol by the government after the balance sheet date cannot be regarded as an event occurring after the Balance Sheet date, which requires an adjustment at the Balance Sheet date, since it does not represent a condition present at the balance sheet date. The revenue should be recognized only in the subsequent year with proper disclosures.

(b) Paragraph 4 of Accounting Standard 5 on "Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies", defines Prior Period items as "income or expenses which arise in the current period as a result of errors or omissions in the preparation of the financial statements of one or more prior periods".

Rectification of error in inventory valuation is a prior period item vide provisions of AS 5. ₹ 20 lakhs must be added to the opening inventory of 1/4/2013. It is also necessary to show ₹ 20 lakhs as a prior period adjustment in the Profit and loss Account. Separate disclosure of this item as a prior period item is required as per Para 15 of AS 5.

18. (a) As per AS 11 (revised 2003), 'The Effects of Changes in Foreign Exchange Rates', monetary items denominated in a foreign currency should be reported using the closing rate at each balance sheet date. The effect of exchange difference should be taken into profit and loss account. Trade payables is a monetary item, hence should be valued at the closing rate i.e, ₹ 48 at 31st March, 2014 irrespective of the payment for the same subsequently at lower rate in the next financial year. The difference of ₹ 5 (₹ 48 less ₹ 43) per US dollar should be shown as an exchange loss in the profit and loss account for the year ended 31st March, 2014 and is not to be adjusted against the cost of raw materials. In the subsequent year, the company would record an exchange gain of ₹1 per US dollar, i.e., the difference between ₹ 48 and ₹ 47 per US dollar. Hence, the accounting treatment adopted by the company is incorrect.

(b) As per AS 12 'Accounting for Government Grants', Government grants sometimes become refundable because certain conditions are not fulfilled. A government grant that becomes refundable is treated as an extraordinary item as per AS 5.

The amount refundable in respect of a government grant related to revenue is applied first against any unamortised deferred credit remaining in respect of the grant. To the extent that the amount refundable exceeds any such deferred credit, or where no deferred credit exists, the amount is charged immediately to profit and loss statement.

In the present case, the amount of refund of government grant should be shown in the profit and loss account of the company as an extraordinary item during the year 2013-14.

19. (a) According to para 19 of AS 16 'Borrowing Costs', capitalisation of borrowing costs should cease when substantially all the activities to prepare the qualifying asset for its intended use or sale are completed.

In the given case, since the qualifying asset was ready to use in January, 2014, therefore, interest till that date can only be capitalized. Hence, interest of ₹ 36 lakhs will only be capitalized. The balance of ₹ 14 lakhs (i.e. 50-36) will be debited to Profit and Loss Account.

(b) (1) Calculation of annual lease payment

	₹
Cost of the equipment	20,00,000
Unguaranteed residual value	2,50,000
PV residual value for 4 years @ 10% (2,50,000 x 0.683)	1,70,750
Fair value to be recovered from lease payment (₹ 20,00,000-1,70,750)	18,29,250
PV Factor for 4 years @ 10%	3.16987
Annual lease payment (₹18,29,250/PV Factor for 4 years @ 10% i.e. 3.16987	577074

(2) Unearned Finance Income

Total lease payments (₹ 5,77,074 x 4)	23,08,296
Add: Residual value	2,50,000
Gross investments	25,58,296
Less: Present value of investments (₹ 18,29,250 +1,70,750)	20,00,000
Unearned Finance Income	5,58,296

(3) Segregation of Finance Income

Year	Lease rentals (₹)	Finance charge @ 10% on outstanding amount of the year (₹)	Repayment (₹)	Outstanding Amount (₹)
0	-	-	-	20,00,000
1	5,77,074	2,00,000	3,77,074	16,22,926
2	5,77,074	1,62,293	4,14,781	12,08,145
3	5,77,074	1,20,814	4,56,260	7,51,885
4	8,27,074	75,189	7,51,885	-
	25,58,296	5,58,296	20,00,000	

20. (a) Computation of earnings per share

EPS for the year 2012-13 as originally reported

= ₹ 22,00,000/1,10,000 shares = ₹ 20

EPS for the year 2012-13 restated for rights issue

= ₹ 22,00,000/ (1,10,000 shares x 1.07) = ₹ 18.69

EPS for the year 2013-14 including effects of rights issue

Adjusted No. of Shares = (1,10,000 x 1.07 x 4/12) + (1,37,500 x 8/12) = 1,30,900

EPS $= \frac{33,00,000}{1,30,900} = 25.21$

Working Note:

1. Calculation of Theoretical ex-rights fair value per share

$$\frac{\text{Fair value of shares immediately prior to exercise of rights + Total amount received from exercise}}{\text{Number of shares outstanding prior to exercise + Number of shares issued in the exercise}}$$

$$\frac{(₹\ 270 \times 1,10,000 \text{ shares}) + (₹\ 180 \times 27,500 \text{ Shares})}{1,10,000 + 27,500 \text{ Shares}} = 3,46,50,000/1,37,500$$

Theoretical ex-rights fair value per share = ₹ 252

2. Calculation of Computation of adjustment factor:

$$\frac{\text{Fair value per share prior to exercise of rights}}{\text{Theoretical ex-rights value per share}}$$

$$\frac{₹\ (270)}{₹\ (252)} = 1.071$$

(b) According to para 55 of AS 26 'Intangible Assets', "expenditure on an intangible item should be recognised as an expense when it is incurred unless it forms part of the cost of an intangible asset".

In the given case, advertisement expenditure of ₹ 4 crores had been taken up for the marketing of a new product which may provide future economic benefits to an enterprise by having a turnover of ₹ 50 crores. Here, no intangible asset or other asset is acquired or created that can be recognised. Therefore, the accounting treatment by the company of debiting the entire advertising expenditure of ₹ 4 crores to the Profit and Loss account of the year is correct.

PAPER – 6: AUDITING AND ASSURANCE

PART – I : ACADEMIC UPDATE
(Legislative Amendments as per the Companies Act, 2013)

1. Payments controlled by the Companies Act, 2013:

   (a) Under section 180, the Board of Directors of a company except with the consent of the company by a special resolution exercises the following powers.

   (i) to sell, lease or otherwise dispose of the whole or substantially the whole of the undertaking of the company or where the company owns more than one undertaking, of the whole or substantially the whole of any of such undertakings.

   (ii) to invest otherwise in trust securities the amount of compensation received by it as a result of any merger or amalgamation;

   (iii) to borrow money, where the money to be borrowed, together with the money already borrowed by the company will exceed aggregate of its paid-up share capital and free reserves, apart from temporary loans obtained from the company's bankers in the ordinary course of business:

   Provided that the acceptance by a banking company, in the ordinary course of its business, of deposits of money from the public, repayable on demand or otherwise, and withdrawable by cheque, draft, order or otherwise, shall not be deemed to be a borrowing of monies by the banking company within the meaning of this clause.

   (iv) to remit, or give time for the repayment of, any debt due from a director.

   (b) Under section 181, the Board of Directors of a company can contribute to the bonafide charitable and other funds any amount in any financial year. Prior permission of the company in general meeting is required in case if the aggregate of such contribution exceeds 5% of its average net profits for the three immediately preceding financial years.

   (c) Section 182 deals with prohibition and restriction regarding political contributions. According to this section, a government company or any other company which has been in existence for less than three financial years cannot contribute any amount directly or indirectly to any political party. In other cases, contribution in any financial year should not exceed 7½ % of average net profits during the three immediately preceding financial years.

   (d) Section 183 permits the Board and other person to make contributions to the National Defence Fund or any other Fund approved by the Central Government for the purpose of National Defence to any extent as it thinks fit.

2. Allotment of shares and receipt of Allotment: (Section 39 of the Companies Act, 2013)

(i) Examine Director's Minutes Book to verify approval of allotments.

(ii) Compare copies of letters of allotment with entries in the Application and Allotment Book.

(iii) Trace entries in the Cash book into the Application and Allotment Book for the verification of amounts collected on allotment.

(iv) Trace the amount collected on application as well as those on allotment from the Application and Allotment Book into the Share Register.

(v) Check whether the amount stated in the prospectus as the minimum amount has been subscribed and the sums payable on such application have been received by the company.

(vi) Check that the amount payable on the application on every security is not less than five percent of the nominal amount of security or such other percentage or amount as may be prescribed by the SEBI.

(vii) If the stated minimum amount has not been subscribed and the sum payable on subscription is not received within a period of thirty days from the date of issue of the prospectus or such period as my be specified by the SEBI, check that the amount received above is returned within a period of fifteen days from the closure of the issue and if in case the amount is not repaid within such period, the directors in default shall jointly and severally be liable to repay that amount with interest at the rate of fifteen percent per annum.

(viii) Check totals of amounts payable on allotment and verify the journal entry debiting Share Allotment Account and crediting Share Capital Account.

3. Prohibition for buy back in certain circumstances : Section 70 of the Companies Act, 2013.

(1) No company shall directly or indirectly purchase its own shares or other specified securities—

(a) through any subsidiary company including its own subsidiary companies; or

(b) through any investment company or group of investment companies; or

(c) if a default, by the company, in repayment of deposit or interest payable thereon, redemption of debentures or preference shares or payment of dividend to any shareholder or repayment of any term loan or interest payable thereon to any financial institutions or bank, is subsisting. Provided that the buy – back is not prohibited if the default is remedied and a period of three years has elapsed since the cessation of the default.

(2) No company shall directly or indirectly purchase its own shares or other specified securities in case such company has not complied with provisions of Sections 92,123, 127 and 129. Section 92 relates to the filing of Annual Return, Section 123

and 127 to declaration and payment of dividend and Section 129 to the financial statement of the company.

4. Central Government to prescribe Accounting Standards (Section 133 of the Companies Act, 2013): Section 133 of the Companies Act, 2013 provides the provisions for Central Government to prescribe accounting standards. According to section 133 of the Companies Act, 2013:

   "Accounting Standards" means the standards of accounting or any addendum thereto as recommended by the Institute of Chartered Accountants of India (ICAI) constituted under section 3 of the Chartered Accountants Act, 1949, as may be prescribed by the Central Government in consultation with and after examination of the recommendations made by the National Financial Reporting Authority constituted under section 132 of the Companies Act, 2013.

   In respect of accounting standards, the role of National Financial Reporting Authority is limited to advise the Central Government on the accounting standards recommended by ICAI for adoption by companies.

   The Ministry of Corporate Affairs (MCA) vide General Circular No. 15/2013 dated 13th September, 2013 has clarified that till the Standards of Accounting or any addendum thereto are prescribed by Central Government in consultation and recommendation of the National Financial Reporting Authority, the existing Accounting Standards notified under the Companies Act, 1956 shall continue to apply.

5. Payment of Dividend in proportion to amount paid-up (Section 51 of the Companies Act, 2013): A company, if so authorised by its Articles, may pay dividend in proportion to the amount paid-up on each share.

PART – II : QUESTIONS AND ANSWERS

QUESTIONS

1. State with reason (in short) whether the following statements are true or false:

   (i) The principle of confidentiality precludes auditor to disclose the information about the client to a third party at all circumstances without any exception.

   (ii) It is no part of subsequent auditor's duty to verify opening balances of Ledger accounts of current years, on the basis of Balance Sheet audited by Previous Auditor.

   (iii) AS 10 "Accounting for Fixed Assets" is also applicable to wasting assets like quarries, minerals, oil and natural gases.

   (iv) When Government grants are received in the form of assets such as land, plant and equipments etc., free of cost, then, such assets should be entered in the books of accounts at nominal value.

(v) Confirmations received by the auditor directly from third parties are conclusive evidence in support of a transaction.

(vi) A branch auditor is a joint auditor according to SA 299 and his relationship with the company auditor is governed by the said Standard.

(vii) Branch auditor of a company should give photocopies of his working papers on demand by Company Auditor.

(viii) Events occurring after the balance sheet date must be disclosed in the financial statements.

(ix) When an auditor identifies a Misstatement resulting from fraud, it is his responsibility to communicate it to the regulatory and enforcement authorities apart, from those charged with governance.

(x) Internal check is part of internal control system.

2. Discuss with reference to SAs:

(a) While planning the audit of S Ltd. you want to apply sampling techniques. What are the risk factors you should keep in mind?

(b) What are the auditor's responsibilities in respect of corresponding figures?

(c) IT systems also pose specific risks to an entity's internal control. What are those risks?

Nature of Auditing

3. (a) Discuss the types of audits required under law.

(b) What are the inherent limitations of audit?

4. As a Statutory Auditor, how would you deal with the following?

(a) The Managing Director of the Company has committed a "Teeming and Lading" Fraud. The amount involved has been however subsequently after the year end deposited in the company.

(b) The accountant of C Ltd. has requested you, not to send balance confirmations to a particular group of debtors since the said balances are under dispute and the matter is pending in the court.

Basic Concepts in Auditing

5. What are the obvious assertions in the following items appearing in the Financial Statements?

(a) Profit and Loss Statement

Travelling Expenditure	₹ 50,000

(b) Balance Sheet

Trade receivable	₹ 2,00,000

6. (a) What are Audit working papers and why should they be carefully preserved by the Auditor?

   (b) Explain the advantages of "Audit Working Papers".

7. (a) What is "Audit Evidence"?

   (b) What are the various methods of obtaining audit evidence? Mention the same in brief.

   (c) Discuss the principles, which are useful in assessing the reliability of audit evidence.

Preparation for an Audit

8. (a) Explain concept of materiality and factors which act as guiding factors to this concept.

   (b) Describe a set of instructions, which an auditor has to give to his client before the start of actual audit.

9. Write short notes on the following:

   (a) Reliability of external confirmations.

   (b) Factors governing modes of communication of auditor with those charged with governance.

   (c) Procedures to be performed by the auditor in expressing opinion on 'going concern' assumption.

Internal Control

10. In a medium size trading organisation the accountant was given additional responsibility of making recoveries from the trade receivables. On one occasion, when an insurance claim of ₹ 25,000 was received, he credited the same to the account of a debtor and misappropriated the cash which he had recovered from the said debtor. Pinpoint weaknesses in the internal control system which led to this situation. Comment.

11. (a) Why are Computer Aided Audit Techniques (CAAT) required in EDP audit?

    (b) What are the advantages of CAATs?

Vouching & Verification of Assets and Liabilities

12. (a) What procedure an auditor should adopt to test the authenticity of cash at bank?

    (b) Give your comments and observations on no entry is passed for cheques received by the auditee on the last day of the year, but not yet deposited with the bank.

13. How will you verify/vouch the following:

    (a) Sale proceeds of Scrap Material.

    (b) Trade Marks and Copyrights.

(c) Machinery acquired under Hire-purchase system.

(d) Work-in-progress.

14. XYZ Ltd. Co. gave a donation of ₹ 50,000 each to a Charitable Society running a school and a trust set up for the service of Blind during financial year ending on 31st March, 2014. The average net profits of the company for the last three years were 15 lakhs. Comment.

The Company Audit

15. (a) Under what circumstances the retiring Auditor cannot be reappointed?

(b) Explain the concept of joint audit. Discuss its advantage and disadvantage.

16. As an auditor, comment on the following situations/statements:

(a) The sale and purchases of investments of A Ltd., was controlled through a committee. Shri B sold some of the investments without discussing the same with the other members of the committee as they were out of station and Shri B believed that its price would fall and the company would suffer a loss if it is not sold. A Ltd. earned a profit of ₹ 1 lakh from such sale.

(b) The company due to liquidity crises sold and leased back the same vehicles from leasing companies. In the notes to accounts, the company stated 'Vehicles taken on lease repayable in 46 instalments of ₹ 26,650 each'.

(c) No depreciation provided on a machinery costing ₹ 50 lakhs imported three years back, since it is yet to be put into use.

17. (a) State the basic elements of the Auditor's Report.

(b) When does an auditor issue unqualified opinion and what does it include?

18. As an auditor, how will you verify application and allotment money received on shares issued for cash?

Special Audits

19. (a) State any five special points which you, as an auditor, would look into while examining the income and collection of fund by an NGO engaged in providing relief work for flood victims.

(b) You are approached by a partnership firm to list out the advantages that will accrue to them, if the accounts are audited. State five important advantages.

20. An audit of Expenditure is one of the major components of Government Audit. In the context of 'Government Expenditure Audit', write in brief, what do you understand by:

(i) Audit against Rules and Orders

(ii) Audit of Sanctions

(iii) Audit against Provision of Funds

(iv) Propriety Audit

(v) Performance Audit

SUGGESTED ANSWERS / HINTS

1. (i) False: The principle of confidentiality is one of the basic principles of auditing. Auditor is generally not expected to disclose the information of his client to others. But it is not the case always. He can disclose the information to others if (a) permitted by his client or (b) he has to disclose it as per any statutory obligation dictated by any law.

(ii) False: According to SA 510 "Initial Audit Engagements - Opening Balances", it is the responsibility of the auditor to verify and obtain appropriate evidence in respect of opening balances brought forward from the preceding period.

(iii) False: AS 10 "Accounting for Fixed Assets" clearly states that this Accounting Standard is not applicable to wasting assets like quarries, minerals oil and natural gas.

(iv) True: According to AS 12 "Accounting for Government Grants " when Government grants in the form of non-monetary assets such as land, plant and equipments etc. are received free of costs then such assets should be entered in the books of account at nominal value.

(v) False: Confirmations received directly from the third parties by the auditor are more reliable but same cannot be treated as conclusive evidence.

(vi) False: Branch auditor is not a joint auditor within the meaning of SA 299. He is another auditor within the meaning of SA 600.

(vii) False: As per SA 230 on "Audit Documentation", audit documentation is the property of the auditor. He may at his discretion, make portions of, or extracts from, audit documentation available to clients, provided such disclosure does not undermine the validity of the work performed, or, in the case of assurance engagements, the independence of the auditor or of his personnel.

Main auditor does not have right of access to the working papers of the branch auditor. In the case of a company, the main auditor has to consider the report of the branch auditor and has a right to seek clarification and to visit the branch but cannot ask for the copy of working papers and therefore, the branch auditor is under no compulsion to give photocopies of his working papers to the principal auditor of the Company.

(viii) False: As per AS-4 on "Contingencies and Events Occurring After the Balance Sheet Date", Events occurring after the balance sheet date which do not affect the figures stated in the financial statements would not normally require disclosure in the financial statements although they may be of such significance that they may require a disclosure in the report of the approving authority to enable users of financial statements to make proper evaluations and decisions.

(ix) True: As per SA 240 "The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements" an auditor identifies a misstatement resulting from fraud or error it is his responsibility to communicate the matter with those charged with the governance and, in some circumstances, when so required by laws or regulations, to regulatory and enforcement authorities also.

(x) True: Internal check has been defined as "checks on day-to-day transactions which operate continuously as part of the routine system whereby the work of one person is proved independently or is complementary to the work of another, the object being the prevention or early detection of errors or fraud". Internal check is a part of the overall internal control system and operates as a built-in device as far as the staff organisation and job allocation aspects of the control system are concerned.

2. (a) Risk Factors while applying sampling techniques: As per SA 530(Revised) "Audit Sampling", sampling risk is the risk that the auditor's conclusion based on a sample may be different from the conclusion if the entire population were subjected to the same audit procedure. Sampling risk can lead to two types of erroneous conclusions.

(i) In the case of a test of controls, that controls are more effective than they actually are, or in the case of tests of details, that a material misstatement does not exists when in fact it does. The auditor is primarily concerned with this type of erroneous conclusion because it affects audit effectiveness and is more likely to lead to an inappropriate audit opinion.

(ii) In the case of test of controls, the controls are less effective than they actually are, or in the case of tests of details, that a material misstatements exists when in fact it does not. This type of erroneous conclusion affects audit efficiency as it would usually lead to additional work to establish that initial conclusions were incorrect.

(b) Auditor's responsibilities in respect of corresponding figures: As per SA 710 "Comparative Information—Corresponding Figures and Comparative Financial Statements", in respect of corresponding figures, the auditor shall determine whether the financial statements include the comparative information required by the applicable financial reporting framework and whether such information is appropriately classified. For this purpose, the auditor shall evaluate whether:

(i) The comparative information agrees with the amounts and other disclosures presented in the prior period; and

(ii) The accounting policies reflected in the comparative information are consistent with those applied in the current period or, if there have been changes in accounting policies, whether those changes have been properly accounted for and adequately presented and disclosed.

If the auditor becomes aware of a possible material misstatement in the comparative information while performing the current period audit, the auditor shall perform such additional audit procedures as are necessary in the circumstances to obtain sufficient appropriate audit evidence to determine whether a material misstatement exists. If the auditor had audited the prior period's financial statements, the auditor shall also follow the relevant requirements of SA 560 "Subsequent Events".

As required by SA 580, "Written Representations", the auditor shall request written representations for all periods referred to in the auditor's opinion. The auditor shall also obtain a specific written representation regarding any prior period item that is separately disclosed in the current year's statement of profit and loss.

(c) Specific Risk to an Entity's internal Control: As per SA 315 "Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and its Environment", IT system also poses specific risks to an entity's Internal Control. They are–

(i) Reliance on systems or programs that are inaccurately processing data, processing inaccurate data or both

(ii) Unauthorised access to data that may result in destruction of data or improper changes to data, including the recording of unauthorized or non existent transactions, or inaccurate recording of transactions. Particular risk may arise when multiple users access a common database.

(iii) The possibility of IT personnel gaining access beyond those necessary to perform their assigned duties thereby breaking down segregation of duties.

(iv) Unauthorised changes to data in Master files

(v) Unauthorised changes to systems or programs.

(vi) Failure to make necessary changes to systems or programs.

(vii) In appropriate manual intervention

(viii) Potential loss of data or inability to access data as required.

3. (a) Audits required under Law: Audit is not legally obligatory for all types of business organisations or institutions. On this basis audits may be of two broad categories i.e., audit required under law and voluntary audits.

The organisations which require audit under law are the following:

(i) Companies governed by the Companies Act;

(ii) Banking companies governed by the Banking Regulation Act, 1949;

(iii) Electricity supply companies governed by the Electricity Supply Act, 1948;

(iv) Co-operative societies registered under the Co-operative Societies Act, 1912;

(v) Public and charitable trusts registered under various Religious and Endowment Acts;

(vi) Corporations set up under an Act of Parliament or State Legislature such as the Life Insurance Corporation of India.

(vii) Specified entities under various sections of the Income-tax Act, 1961.

(viii) Audit required under Sales-tax and VAT by various State Government.

(b) **Inherent limitations of Audit:** As per SA 200 "Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with Standards on Auditing", the objectives of an audit of financial statements, prepared with in a framework of recognised accounting policies and practices and relevant statutory requirements, if any, is to enable an auditor to express an opinion on such financial statements. In forming his opinion on the financial statements, the auditor follows procedures designed to satisfy him that the financial statements reflect a true and fair view of the financial position and operating results of the enterprise. The process of auditing, however, is such that it suffers from certain limitations, i.e. the limitation which cannot be overcome irrespective of the nature and extent of audit procedures. The limitations of an audit arise from:

(i) The Nature of Financial Reporting: The preparation of financial statements involves judgment by management in applying the requirements of the entity's applicable financial reporting framework to the facts and circumstances of the entity. In addition, many financial statement items involve subjective decisions or assessments or a degree of uncertainty, and there may be a range of acceptable interpretations or judgments that may be made. Consequently, some financial statement items are subject to an inherent level of variability which cannot be eliminated by the application of additional auditing procedures.

(ii) The Nature of Audit Procedures: There are practical and legal limitations on the auditor's ability to obtain audit evidence. For example:

1. There is the possibility that management or others may not provide, intentionally or unintentionally, the complete information that is relevant to the preparation and presentation of the financial statements or that has been requested by the auditor.

2. Fraud may involve sophisticated and carefully organised schemes designed to conceal it. The auditor is neither trained as nor expected to be an expert in the authentication of documents.

3. An audit is not an official investigation into alleged wrongdoing. Accordingly, the auditor is not given specific legal powers, such as the power of search, which may be necessary for such an investigation.

(iii) Timeliness of Financial Reporting and the Balance between Benefit and Cost: The relevance of information, and thereby its value, tends to diminish over time, and there is a balance to be struck between the reliability of information and its cost. There is an expectation by users of financial statements that the auditor will form an opinion on the financial statements within a reasonable period of time and at a reasonable cost, recognising that it is impracticable to address all information that may exist or to pursue every matter exhaustively on the assumption that information is in error or fraudulent until proved otherwise.

(iv) Other Matters that Affect the Limitations of an Audit: In the case of certain assertions or subject matters, the potential effects of the limitations on the auditor's ability to detect material misstatements are particularly significant. Such assertions or subject matters include:

- Fraud, particularly fraud involving senior management or collusion.
- The existence and completeness of related party relationships and transactions.
- The occurrence of non-compliance with laws and regulations.
- Future events or conditions that may cause an entity to cease to continue as a going concern.

Because of the limitations of an audit, there is an unavoidable risk that some material misstatements of the financial statements may not be detected, even though the audit is properly planned and performed in accordance with SAs.

4. (a) Fraud Committed by Managing Director: The Managing Director of the company has committed a "Teeming and Lading" fraud. The fact that the amount involved has been subsequently deposited after the year end is not important because the auditor is required to perform his responsibilities as laid down in SA 240, "The Auditor's responsibilities relating to Fraud in an Audit of Financial Statements". First of all, as per SA 240, the auditor needs to perform procedures whether the financial statements are materially misstated. Because an instance of fraud cannot be considered as an isolated occurrence and it becomes important for the auditor to perform audit procedures and revise the audit risk assessment. Secondly, the auditor needs to consider the impact of fraud on financial statements and its disclosure in the audit report. Thirdly, the auditor should communicate the matter to the Chairman and Board of Directors. Finally, in view of the fact that the fraud has been committed at the highest level of management, it affects the reliability of audit evidence previously obtained since there is a genuine doubt about representations of management. Finally, the auditor shall have to report

under CARO, 2003 indicating the nature and amount involved in respect of fraud noticed during the year.

(b) External confirmation Requests: SA 505, "External Confirmations", establishes standards on the debtor's use of external confirmation as a means of obtaining audit evidence. It requires that the auditor should employ external confirmation procedures in consultation with the management.

If management refuses to allow the auditor to send a confirmation request, the auditor shall:

(i) Inquire as to management's reasons for the refusal, and seek audit evidence as to their validity and reasonableness;

(ii) Evaluate the implications of management's refusal on the auditor's assessment of the relevant risks of material misstatement, including the risk of fraud, and on the nature, timing and extent of other audit procedures; and

(iii) Perform alternative audit procedures designed to obtain relevant and reliable audit evidence.

If the auditor concludes that management's refusal to allow the auditor to send a confirmation request is unreasonable, or the auditor is unable to obtain relevant and reliable audit evidence from alternative audit procedures, the auditor shall communicate with those charged with governance in accordance with "SA 260 Communication with Those Charged with Governance". The auditor also shall determine the implications for the audit and the auditor's opinion in accordance with "SA 705 Modifications to the Opinion in the Independent Auditor's Report".

5. (a) Travelling Expenditure: ₹ 50,000

- ➢ Expenditure has been actually incurred for the purpose of travelling.
- ➢ Travelling has been undertaken during the year under consideration.
- ➢ Total amount of expenditure incurred is ₹ 50,000 during the year.
- ➢ It has been treated as revenue expenditure and charged to profit and loss account.

(b) Trade receivable: ₹ 2,00,000

- ➢ These include all sales transaction occurred during the year.
- ➢ These have been recorded properly and occurred during the year
- ➢ These constitute assets of the entity.

These have been shown at proper value, i.e. after showing the deduction on account of provision for bad and doubtful debts.

6. (a) **Audit Working Papers:** As per SA 230(Revised) "Audit Documentation", audit Working Papers are the record of audit procedures performed, relevant audit evidence obtained, and conclusions the auditor reached.

Working papers are the

(i) Evidence of the auditor's basis for a conclusion about the achievement of the overall objective of the auditor; and

(ii) Evidence that the audit was planned and performed in accordance with SAs and applicable legal and regulatory requirements.

Besides they serve a number of additional purposes, including the following:

- Assisting the engagement team to plan and perform the audit.
- Assisting members of the engagement team responsible for supervision to direct and supervise the audit work, and to discharge their review responsibilities in accordance with SA 220.
- Enabling the engagement team to be accountable for its work.
- Retaining a record of matters of continuing significance to future audits.
- Enabling the conduct of quality control reviews and inspections in accordance with SQC 1.
- Enabling the conduct of external inspections in accordance with applicable legal, regulatory or other requirements.

Standard on Quality Control (SQC) 1, "Quality Control for Firms that Perform Audits and Reviews of Historical Financial Information, and Other Assurance and Related Services Engagements", issued by the Institute, provides that, unless otherwise specified by law or regulation, working papers are the property of the auditor. He may at his discretion, make portions of, or extracts from, working papers available to clients, provided such disclosure does not undermine the validity of the work performed, or, in the case of assurance engagements, the independence of the auditor or of his personnel

Retention of working papers: Working papers should be retained, long enough, for a period of time sufficient to meet the needs of his practice and satisfy any legal or professional requirement of record retention. SQC 1 requires firms to establish policies and procedures for the retention of engagement documentation. The retention period for audit engagements ordinarily is no shorter than seven years from the date of the auditor's report, or, if later, the date of the group auditor's report.

(b) Audit working papers constitute the basic records for the auditor in respect of the audit carried out by him. They constitute the link between the auditor's report and clients' record.

These include retention of permanent record in the nature of a document to show the actual audit work executed the nature of the, work, the extent of the work and important points, facts, dates and decisions having bearing on the audit of the accounts audited. The working papers, if properly maintained, can be used as defense in case of need. The audit working papers are found very useful in the following aspects as they:

(i) aid in the planning and performance of the audit;

(ii) aid in the supervision and review of the audit work;

(iii) provide evidence of the audit work performed to support the auditor's opinion; and

(iv) act as an evidence in the Court of law when a charge of negligence is brought against the auditor.

7. (a) Audit Evidence: As per SA 500 "Audit evidence" Information used by the auditor in arriving at the conclusions on which the auditor's opinion is based. Audit evidence includes both information contained in the accounting records underlying the financial statements and other information.

(b) Methods of Obtaining Audit Evidence: The auditor obtains evidence by one or more of the following methods:

Inspection: Inspection involves examining records or documents, whether internal or external, in paper form, electronic form, or other media, or a physical examination of an asset. Inspection of records and documents provides audit evidence of varying degrees of reliability, depending on their nature and source and, in the case of internal records and documents, on the effectiveness of the controls over their production. An example of inspection used as a test of controls is inspection of records for evidence of authorisation.

Some documents represent direct audit evidence of the existence of an asset, for example, a document constituting a financial instrument such as a inventory or bond. Inspection of such documents may not necessarily provide audit evidence about ownership or value. In addition, inspecting an executed contract may provide audit evidence relevant to the entity's application of accounting policies, such as revenue recognition.

Inspection of tangible assets may provide reliable audit evidence with respect to their existence, but not necessarily about the entity's rights and obligations or the valuation of the assets. Inspection of individual inventory items may accompany the observation of inventory counting.

Observation: Observation consists of looking at a process or procedure being performed by others, for example, the auditor's observation of inventory counting by the entity's personnel, or of the performance of control activities. Observation provides audit evidence about the performance of a process or procedure, but is limited to the point in time at which the observation takes place, and by the fact that the act of being observed may affect how the process or procedure is performed.

External Confirmation: An external confirmation represents audit evidence obtained by the auditor as a direct written response to the auditor from a third party (the confirming party), in paper form, or by electronic or other medium. External confirmation procedures frequently are relevant when addressing assertions associated with certain account balances and their elements. However, external confirmations need not be restricted to account balances only. For example, the auditor may request confirmation of the terms of agreements or transactions an entity has with third parties; the confirmation request may be designed to ask if any modifications have been made to the agreement and, if so, what the relevant details are. External confirmation procedures also are used to obtain audit evidence about the absence of certain conditions, for example, the absence of a "side agreement" that may influence revenue recognition.

Recalculation: Recalculation consists of checking the mathematical accuracy of documents or records. Recalculation may be performed manually or electronically.

Reperformance: Reperformance involves the auditor's independent execution of procedures or controls that were originally performed as part of the entity's internal control.

Analytical Procedures: Analytical procedures consist of evaluations of financial information made by a study of plausible relationships among both financial and non-financial data. Analytical procedures also encompass the investigation of identified fluctuations and relationships that are inconsistent with other relevant information or deviate significantly from predicted amounts.

Inquiry: Inquiry consists of seeking information of knowledgeable persons, both financial and non- financial, within the entity or outside the entity. Inquiry is used extensively throughout the audit in addition to other audit procedures. Inquiries may range from formal written inquiries to informal oral inquiries. Evaluating responses to inquiries is an integral part of the inquiry process.

Responses to inquiries may provide the auditor with information not previously possessed or with corroborative audit evidence. Alternatively, responses might provide information that differs significantly from other information that the auditor has obtained, for example, information regarding the possibility of management override of controls. In some cases, responses to inquiries provide a basis for the auditor to modify or perform additional audit procedures.

Although corroboration of evidence obtained through inquiry is often of particular importance, in the case of inquiries about management intent, the information available to support management's intent may be limited. In these cases, understanding management's past history of carrying out its stated intentions, management's stated reasons for choosing a particular course of action, and management's ability to pursue a specific course of action may provide relevant information to corroborate the evidence obtained through inquiry.

In respect of some matters, the auditor may consider it necessary to obtain written representations from management and, where appropriate, those charged with governance to confirm responses to oral inquiries.

(c) Reliability of Audit Evidence: The reliability of information to be used as audit evidence, and therefore of the audit evidence itself, is influenced by its source and its nature, and the circumstances under which it is obtained, including the controls over its preparation and maintenance where relevant. Therefore, generalisations about the reliability of various kinds of audit evidence are subject to important exceptions. Even when information to be used as audit evidence is obtained from sources external to the entity, circumstances may exist that could affect its reliability. For example, information obtained from an independent external source may not be reliable if the source is not knowledgeable, or a management's expert may lack objectivity. While recognising that exceptions may exist, the following generalisations about the reliability of audit evidence may be useful:

The reliability of audit evidence is increased when it is obtained from independent sources outside the entity.

The reliability of audit evidence that is generated internally is increased when the related controls, including those over its preparation and maintenance, imposed by the entity are effective.

Audit evidence obtained directly by the auditor (for example, observation of the application of a control) is more reliable than audit evidence obtained indirectly or by inference (for example, inquiry about the application of a control).

Audit evidence in documentary form, whether paper, electronic, or other medium, is more reliable than evidence obtained orally (for example, a contemporaneously written record of a meeting is more reliable than a subsequent oral representation of the matters discussed).

Audit evidence provided by original documents is more reliable than audit evidence provided by photocopies or facsimiles, or documents that have been filmed, digitized or otherwise transformed into electronic form, the reliability of which may depend on the controls over their preparation and maintenance.

8. (a) Concept of materiality: SA 320 "Materiality in Planning and Performing an Audit", establishes standards on the concept of materiality and the relationship with audit risk while conducting an audit. Hence, the auditor requires more reliable evidence in support of material items. SA 320 defines material items as relatively important and relevant items, i.e., items the knowledge of which would influence the decision of the user of financial statements. Financial statements materially affect if such statement is erroneously stated or omitted to be stated there in and economic decision of the users taken on the basis of such information is influenced by such misstatements or omissions.

The auditor has to ensure that such items are properly and distinctly disclosed in the financial statements.

The concept of materiality is fundamental to the process of accounting. It covers all the stages from recording to classification and presentation. It is very important for the auditor who has constantly to judge whether a particular item is material or not.

There is an inverse relationship between materiality and the degree of audit risk. The higher the materiality level, the lower the audit risk and vice versa. For example, the risk that a particular account balance or class of transactions could be misstated by an extremely large amount might be very low but the risk that it could be misstated by an extremely small amount might be very high.

Factors to be considered for determining materiality

(i) Item of materiality may be determined individually or in aggregate.

(ii) The materiality depends on the regulatory or legal considerations.

(iii) Materiality is not often reckoned with respect to quantitative details above. It has qualitative dimensions as well.

(iv) Even insignificant items in terms of quality may be material in special circumstances.

(v) Sometimes the materiality of an item in terms of quantity is described in law itself. For example, Schedule III requires disclosure of items of expenditures which are in excess of one percent or ₹ 1,00,000 whichever is higher.

(vi) An item whose impact is insignificant at present, but in future it may be significant, may be material item.

(b) Following instructions are given by the auditor to the client before the start of audit:

(i) The accounts should be total up and trial balance and final accounts to be kept ready.

(ii) Vouchers should be serially arranged.

(iii) Schedule of trade receivables and trade payables should be prepared.

(iv) Schedule of outstanding expenses, prepaid expenses and accrued income to be kept ready.

(v) A list of bad and doubtful debts should be prepared.

(vi) Schedule of investments should be prepared.

(vii) Certified list of goods returned to be prepared.

(viii) Statement of permanent capital expenditure to be prepared.

(ix) Schedule of deferred revenue expenditures to be prepared.

(x) Names and addresses of managers and other officers should be kept ready.

9. (a) **Reliability of external confirmations:** As per SA 505 "External Confirmation", the reliability of external confirmations depends among other factors, upon the application of appropriate procedures by the auditor in designing the external confirmation request, performing the external confirmation procedures, and evaluating the results of the external confirmation procedures.

The factors that affect the reliability of confirmations include:

(i) The control which the auditor exercises over confirmation request and responses;

(ii) The character of respondents and

(iii) Any restrictions included in the response or imposed by the management

(b) **Factors governing modes of communication of auditor with those charges with governance :** As per SA 260, "Communication with Those Charge with Governance" the auditor may decide whether to communicate orally or in writing, the extent of detail or summarisation in the communication, and whether to communicate in a structured or unstructured manner) may be affected by such factors as:

(i) The size, operating structure, control environment, and legal structure of the entity.

(ii) In the case of an audit of special purpose financial statements, whether the auditor also audits the entity's general purpose financial statements.

(iii) Legal requirements. In some jurisdictions, a written communication with those charged with governance is required in a prescribed form by local law.

(iv) The expectations of those charged with governance, including arrangements made for periodic meetings or communications with the auditor.

(v) The amount of ongoing contact and dialogue the auditor has with those charged with governance.

(vi) Whether there have been significant changes in the membership of a governing body

(c) **Procedures to be performed by the auditor in expressing opinion on 'going concern' assumption:** As per SA 570, "Going Concern", the following are the relevant procedures that are relevant in this connection:

- Analyse and discuss cash flow, profit and other relevant forecasts with management.
- Review events after the balance sheet date for items affecting the entity's ability to continue as a going concern.

- Analyse and discuss the entity's latest available interim financial statements.
- Review the terms of debentures and loan agreements and determine whether any have been breached.
- Read minutes of the meetings of shareholders, the board of directors and important committees for reference to financing difficulties.
- Review the status of matters under litigation and claims.
- Confirm the existence, legality and enforceability of arrangements to provide or maintain financial support with related and third parties and assess the financial ability of such parties to provide additional funds.
- Consider the entity's position concerning unfilled customer orders.

10. Following two essential features of internal control are relevant here:

(i) Breaking the chain of the work in a manner so that no single person can handle a transaction from the beginning to the end and

(ii) Segregation of accounting and custodial functions.

Weakness in internal control system in the instant case:

(a) The accountant is receiving cash and also passing the entries in the books. The accountant should not have been allowed to effect recoveries.

(b) It also appears that system for issuing receipts for amount received - whether cash or cheque is also lacking.

(c) In a small and to some extent medium size organization, the supervision of the owner offsets the deficiencies in internal control system. But in this case, it appears, that supervision and personal control is also lacking.

Thus, in the given case, the main weakness of the system is that it is ignoring the basic requirements of a good internal control system.

11. (a) Computer Aided Audit Techniques (CAATs): The use of computers may result in the design of systems that provide less visible evidence than those using manual procedures. CAATs are such techniques applied through the computer which are used in the verifying the data being processed by it. System characteristics resulting from the nature of EDP processing that demand the use of Computer Aided Audit Techniques (CAAT) are:

(i) *Absence of input documents*: Data may be entered directly into the computer systems without supporting documents. In on-line transaction systems, written evidence of individual data entry authorization, e.g., credit limit approval may not be available.

(ii) *Lack of visible transaction trail*: Certain data may be maintained on computer files only. In a manual system, it is normally possible to follow a transaction through the system by examining source documents, books of account, records, files and reports. In an EDP environment, however, the transaction trail may be partly in machine-readable form, and it may exist only for a limited period of time.

(iii) *Lack of visible output*: In a manual system, it is normally possible to examine visually the results of processing. In EDP systems, the results of processing may not be printed or only a summary data may be printed. Thus, the lack of visible output may result in the need to access data retained on machine readable files.

(iv) *Ease of Access to data and computer programmes*: Data and computer programmes may be altered at the computer or through the use of computer equipment at remote locations. Therefore, in the absence of appropriate controls, there is an increased potential for unauthorized access to, and allocation of, data and programmes by persons inside or outside the entity.

(b) Advantages of CAAT:

(i) *Audit effectiveness*: The effectiveness and efficiency of auditing procedures will be improved through the use of CAAT in obtaining and evaluating audit evidence, for example –

(a) Some transactions may be tested more effectively for a similar level of cost by using the computer.

(b) In applying analytical review procedures, transactions or balance details of unusual items may be reviewed and reports got printed more efficiently by using the computer.

(ii) *Savings in time*: The auditor can save time by reviewing the EDP controls using CAAT than through other audit procedures.

(iii) *Effective test checking and examination in depth*: CAAT permits effective examination in depth of selected transactions since the auditor constructs the lost audit trail.

12. (a) Verification of Cash at Bank: While testing the authenticity of cash at bank, the following areas may be considered by the auditor:

(i) Apart from comparing the entries in the cash book with those in the Pass Book the auditor should obtain a certificate from the bank confirming the balance at the close of the year as shown in the Pass Book.

(ii) Examine the bank reconciliation statement prepared as on the last day of the year and see whether (a) cheques issued by the entity but not presented for payment, and (b) cheques deposited for collection by the entity but not credited in the bank account have been duly debited/credited in the subsequent period.

(iii) Pay special attention to those items in the reconciliation statements which are outstanding for an unduly long period. The auditor should ascertain the reasons for such outstanding items from the management. He should also examine whether any such items require an adjustment write-off.

(iv) Examine relevant certificates in respect of fixed deposits or any type of deposits with banks duly supported by bank advices.

(v) The auditor should examine the possibility, that even though the balance in an apparently inoperative account may have remained stagnant, transactions may have taken place in that account during the year.

(vi) In relation to balances/deposits with specific charge on them, or those held under the requirements of any law, the auditor should examine that suitable disclosures are made in the financial statements.

(vii) Remittances shown as being in transit should be examined with reference to their credit in the bank in the subsequent period. Where the auditor finds that such remittances have not been credited in the subsequent period, he should ascertain the reasons for the same. He should also examine whether the entity has reversed the relevant entries in appropriate cases.

(viii) The auditor should examine that suitable adjustments are made in respect of cheques which have become stale as at the close of the year.

(ix) Where material amounts are held in bank accounts which are blocked, e.g. in foreign banks with exchange control restrictions or any banks which are under moratorium or liquidation, the auditor should examine whether the relevant facts have been suitably disclosed in the financial statements. He should also examine whether suitable adjustments on this account have been made in the financial statements in appropriate cases.

(x) Where the auditor finds that the number of bank accounts maintained by the entity is disproportionately large in relation to its size, the auditor should exercise greater care in satisfying himself about the genuineness of banking transactions and balances.

(b) Cheques Received on the last day of Accounting Year: It is a quite normal that in any ongoing business entity many a times cheques are received from the customers on the last day of the accounting year. It is also quite likely, that cheques received on the last day of the accounting year could not be deposited in the bank. Though normally speaking, it is expected that all cheques should be deposited in the bank daily. But there may be a possibility that such cheques which are received particularly during the late hours could not be deposited in the bank. Therefore, it is quite important to ensure that the system of internal control is effective and such cheques should be properly accounted for to avoid any frauds and that the financial statements reflect a true and fair view.

As far as internal control system is concerned, it should be ensured that a list of such cheques is prepared in duplicate and a copy of the same has been sent to person controlling the trade receivables' ledger and a second copy is handed over to cashier along with the cheques received. The person who is controlling the trade receivables' ledger should ensure that proper accounting entries have been passed by crediting respective trade receivables' accounts. The balance of cheques-in-hand should also be disclosed along with the cash and bank balances in the financial statements.

13. (a) Sale Proceeds of Scrap Material

(i) Review the internal control on scrap materials, as regards its generation, storage and disposal and see whether it was properly followed at every stage.

(ii) Ascertain whether the organisation is maintaining reasonable records for the sale and disposal of scrap materials.

(iii) Review the production and cost records for determination of the extent of scrap materials that may arise in a given period.

(iv) Compare the income from the sale of scrap materials with the corresponding figures of the preceding three years.

(v) Check the rates at which different types of scrap materials have been sold and compare the same with the rates that prevailed in the preceding year.

(vi) See that scrap materials sold have been billed and check the calculations on the invoices.

(vii) Ensure that there exists a proper procedure to identify the scrap material and good quality material is not mixed up with it.

(viii) Make an overall assessment of the value of the realisation from the sale of scrap materials as to its reasonableness.

(b) Trade Marks and Copyrights

(i) Obtain schedule of Trade Marks and Copyrights duly signed by the responsible officer and scrutinise the same and confirm that all of them are shown in the Balance Sheet.

(ii) Examine the written agreement in case of assignment of Copyrights and Assignment Deed in case of transfer of trade marks. Also ensure that trade marks and copyrights have been duly registered.

(iii) Verify existence of copyright by reference to contract between the author and the entity and check the payment of royalty made to author.

(iv) See that the value has been determined properly and the costs incurred for the purpose of obtaining the trade marks and copyrights have been capitalised.

(v) Ascertain that the legal life of the trade marks and copyrights have not expired.

(vi) Ensure that amount paid for both the intangible assets is properly amortised having regard to appropriate legal and commercial considerations, as per the principles enunciated under AS 26 on Intangible Assets.

(c) Machinery acquired under Hire-purchase system

(i) Examine the Board's Minute Book approving the purchase on hire-purchase terms.

(ii) Examine the hire-purchase agreement carefully and note the description of the machinery, cost of the machinery, hire purchase charges, and terms of payment and rate of purchase.

(iii) Assets acquired under Hire Purchase System should be recorded at the full cash value with corresponding liability of the same amount. In case cash value is not readily available, it should be calculated presuming an appropriate rate of interest.

(iv) Hire purchased assets are shown in the balance sheet with an appropriate narration to indicate that the enterprise does not have full ownership thereof. The interest payable along with each installments, whether separately or included therein should be debited to the interest account and not to the asset account.

(d) Work-in-Progress: The audit procedures regarding work-in-progress are similar to those used for raw materials and finished goods. However, the auditor has to carefully assess the stage of completion of the work-in-progress for assessing the appropriateness of its valuation. For this purpose, the auditor may examine the production/costing records (i.e., cost sheets), hold discussions with the personnel concerned, and obtain expert opinion, where necessary. The auditor may advise his client that where possible the work-in-progress should be reduced to the minimum before the closing date. Cost sheets of work-in-progress should be verified as follows:

(i) Ascertain that the cost sheets are duly attested by the works engineer and works manager.

(ii) Test the correctness of the cost as disclosed by the cost records by verification of quantities and cost of materials, wages and other charges included in the cost sheets by reference to the records maintained in respect thereof.

(iii) Compare the unit cost or job cost as shown by the cost sheet with the standard cost or the estimated cost expected.

(iv) Ensure that the allocation of overhead expenses had been made on a rational basis.

Compare the cost sheet in detail with that of the previous year. If they vary materially, investigate the cause thereof.

(v) Ensure that the Work-in-Progress as at Balance Sheet date has been appropriately disclosed in Balance Sheet as per the requirements of Part I of Schedule VI of the Companies Act.

14. Donation to Charitable Institutions: Section 181 of the Companies Act, 2013 provides that the Board of Directors of a company may contribute to bona fide charitable and other funds with prior permission of the company in general meeting for such contribution in case any amount the aggregate of which, in any financial year, exceed five per cent of its average net profits for the three immediately preceding financial years.

Facts of the case: In the instant case, the company has given donation of ₹ 50,000/- each to the two charitable organisations which amounts to ₹ 1,00,000. Assuming that the charitable organisations are not related to the business of the company, the average profits of the last 3 years is ₹ 15 lakhs and the 5% of this works out to ₹ 75,000. Hence the maximum of donation could be ₹ 75,000 only. For excess of ₹ 25,000 the company is required to take prior permission in general meeting which is not been taken.

Conclusion: By paying donations of ₹ 1,00,000 which is more than ₹ 75,000, the Board has contravened the provisions of Section 181 of the Companies Act, 2013. Hence the auditor should qualify his report accordingly.

15. (a) In the following circumstances, as per the Companies Act, 1956, the retiring auditor cannot be reappointed:

(i) A specific resolution has not been passed to reappoint the retiring auditor.

(ii) The auditor proposed to be reappointed does not possess the qualification prescribed under section 226.

(iii) The proposed auditor suffers from the disqualifications under section 226(3) and 226(4).

(iv) He has given to the company notice in writing of his unwillingness to be reappointed.

(v) A resolution has been passed in AGM appointing somebody else or providing expressly that the retiring auditor shall not be reappointed.

(vi) A written certificate has not been obtained from the proposed auditor to the effect that the appointment or reappointment, if made, will be in accordance within the limits specified under section 224(1B).

(b) Joint Audit: The practices of appointing chartered accountants as joint auditors is quite widespread in big companies and corporations, joint audit basically implies pooling together the resources and expertise of more than one firm of auditors to render an expert job in a given time period which may be difficult to accomplish acting individually. It essentially involves sharing of the total work.

When more than one auditor is appointed to audit large entities, such auditors are called joint auditors. Joint auditors have a collective responsibility to report on the financial statements. SA 299, "Joint Audit" deals with duties, rights and professional responsibilities of joint auditors. The joint auditors should follow the principles of division of work and coordination while conducting joint audits.

Advantages of Joint Audit

(i) Pooling and sharing of expertise

(ii) Advantage of mutual consultation.

(iii) Lower work load

(iv) Better quality of work performance.

(v) Improved service to the client.

(vi) Displacement of the auditor of the company in a take-over often obviated.

(vii) In respect of multinational companies, the work can be spread using the expertise if the local firms which are in a better position to deal with detailed work and the local laws and regulations.

(viii) Lower staff development costs.

(ix) Lower costs to carry out the work.

(x) A sense of healthy competition towards a better performance.

Disadvantages of Joint Audit:

(i) The fees being shared.

(ii) Psychological problem where firms of different standing are associated in the joint audit.

(iii) General superiority complexes of some auditors.

(iv) Problems of coordination of the work.

(v) Areas of work of common concern being neglected.

(vi) Uncertainty about the liability for the work done.

(vii) Lack of clear definition of responsibility.

16. (a) Sale of Investments without Proper Authorisation: There should be proper authority for sale of investments. Detailed records regarding disposal of investments should be maintained along with proper documentation.

In the instant case, Mr. B had sold the investments without discussing the matter with the other committee members. This matter, therefore, needs to be addressed by the auditor as purchase and sale can only be authorised by the Committee.

The fact that Mr. B believed that the prices would fall and the company would suffer a loss if the investments are not sold is not good enough for Mr. B to act as per his discretion. A profit of ₹ 1 lakh from such sale is also not a sufficient reason to act since one cannot rule out the possibility of earning higher profits. The formation of the Committee by A Ltd, to control sale and purchase of investments is, perhaps, one of the best aspects of internal control system to eliminate the possibility of manipulation, if any, in sale and purchase of investments. The statutory auditor may however, examine whether there have been any other instances involving non-observance of internal control system and procedures. In any case, the Committee must approve the transaction and authorise the same from the view point of the statutory auditor.

(b) Sale and Leaseback of Vehicles: Under a lease agreement, the lessee acquires the right to use an asset for an agreed period of time in consideration for payment of rent to the lessor. The legal ownership of the asset remains with the lessor.

In the instant case, the company had sold vehicles to two leasing companies to meet its liquidity crises and took them back on lease. In the notes to the accounts it had disclosed about instalments payable to different leasing companies, but without disclosing the true nature of the transaction as covered by AS 19, “Leases”.

The transaction entered into by the company is a classic case of sale and leaseback transaction. In case of such transactions, the sale price of assets and lease rentals normally do not represent fair value since the same are negotiated as a package. In case such a transaction is an operating lease and it is clear that the rentals and the sale price are established at fair value, then in effect it is a normal sale transaction and any profit or loss is normally recognised immediately.

If the sale price is below fair value, any profit or loss is recognised immediately, except that, if the loss is compensated by future rentals at below market price, it is deferred and amortized in proportion to the rental payments over the useful life of the asset.

If the sale price is above fair value, the excess over fair value is deferred and amortized over the useful life or the asset.

Therefore, it would be important for the auditor to determine whether the amount of instalments payable is fair having regard to sale price of assets. In case the leaseback is a finance lease, it is not appropriate to regard an excess of sales proceeds over the carrying amount as income.

Such excess is deferred and amortised over the lease term in proportion to the depreciation of the leased asset. Similarly, it is not appropriate to regard a deficiency as loss. Such deficiency is deferred and amortised over the lease term.

Further, disclosure shall have to be made separately of such transaction in terms of AS 5.

The auditor should, therefore, suitably qualify his report since proper disclosures have not been made as per the requirement of accounting standards.

(c) Non-provision of depreciation: As per AS 6 on "Depreciation Accounting", depreciation is a measure of the wearing out, consumption or other loss of value of a depreciable asset arising from use, effluxion of time or obsolescence through technology and market changes.

Thus, depreciation has to be charged even in case of these assets which are not used at all during the year but by mere effluxion of time provided such assets qualify as depreciable assets. When the machinery has been imported by one entity, it means it was intended to be used for the purpose of business.

Depreciation in respect of this machinery ought to have been provided in the accounts for all the previous years. If there is an intention to use an asset, though it may not have actually been used, it is a 'constructive' or 'passive' use and eligible for claim of depreciation.

Thus, the auditor should ensure compliance with all these requirements and in case of failure he should qualify the report.

17. (a) Basic elements of the Auditor's Report: As per SA 700, "Forming an Opinion and Reporting on Financial Statements", the auditor's report includes the following basic elements, ordinarily, in the following layout:

(i) Title;

(ii) Addressee;

(iii) Introductory Paragraph

(vi) Management's Responsibility for the Financial Statements.

(v) Auditor's Responsibility

(vi) Auditor's Opinion

(vii) Other Reporting Responsibilities

(viii) Signature of the Auditor

(ix) Date of Auditor's Report.

(x) Place of signature

(b) The auditor should express an unqualified opinion when he concludes that the financial statements give a true and fair view in accordance with the financial reporting framework used for preparation and presentation of the financial statements.

An unqualified opinion indicates that:

(i) The financial statements have been prepared using the generally accepted accounting principles and being constantly followed.

(ii) The financial statements comply with relevant statutory requirements and regulations.

(iii) All material matters relevant to proper presentation of the financial information, subject to statutory requirement, if applicable, have been adequately disclosed.

18. Verification of application and allotment money received on Shares Issued for Cash shall be carried out as under:

On Application: Verify the amount received along with the applications for shares in the following manner:

(i) Check entries in the Application and Allotment Book (or Sheets) with the original applications;

(ii) Check entries in the Application and the Allotment Book as regards deposits of money, received with the applications, with those in the Cash Book;

(iii) Vouch amounts refunded to the unsuccessful applicants with copies of Letters of Regret;

(iv) Check the totals columns in the Application and Allotment Book and confirm the journal entry debiting Share Application Account and crediting Share Capital Account.

On Allotment

(i) Examine Director's Minutes Book to verify approval of allotments.

(ii) Compare copies of letters of allotment with entries in the Application and Allotment Book.

(iii) Trace entries in the Cash book into the Application and Allotment Book for the verification of amounts collected on allotment.

(iv) Trace the amount collected on application as well as those on allotment from the Application and Allotment Book into the Share Register.

(v) Check whether the amount stated in the prospectus as the minimum amount has been subscribed and the sums payable on such application have been received by the company.

(vi) Check that the amount payable on the application on every security is not less than five percent of the nominal amount of security or such other percentage or amount as may be prescribed by the SEBI.

(vii) If the stated minimum amount has not been subscribed and the sum payable on subscription is not received within a period of thirty days from the date of issue of the prospectus or such period as my be specified by the SEBI, check that the amount received above is returned within a period of fifteen days from the closure of the issue and if in case the amount is not repaid within such period, the directors in default shall jointly and severally be liable to repay that amount with interest at the rate of fifteen percent per annum.

(v) Check totals of amounts payable on allotment and verify the journal entry debiting Share Allotment Account and crediting Share Capital Account.

19. (a) Five special points to be looked into while examining the income and collection of funds by an NGO engaged in providing relief work for flood victims are:-

(i) Grant donations and contributions received from various Government, other NGO, industry and public should be checked with reference to the grant letter, bank statements and ensured that they are properly accounted and banked.

(ii) Foreign contribution received should be checked with reference to the correspondence receipt issued, bank statement, conversion into local currency. It should be ensured that all such contributions are as per RBI guidelines and be kept in separate bank account.

(iii) In the case of any fund raising cultural or sports program, verify the internal control system, mode of receipt and the authority accountable. Ensure that all collections are duly receipted and deposited in the bank promptly.

(iv) Check the fee received from members with the register of members.

(v) Check interest and dividend received from investments with investment held.

(b) Advantages of audit of accounts of a partnership firm: Advantages are as follows (any five):

(i) Audited accounts provide a convenient and reliable means of settling accounts between the partners and thereby possibility of dispute among them is mitigated.

(ii) On the retirement/death of a partner, audited accounts constitutes a reliable evidence for computing the amount due to the retiring partner or representative of deceased partner.

(iii) Audited accounts are generally accepted by the Income tax authorities for computing the assessable income.

(iv) Audited accounts are relied upon by banks for advancing loan.

(v) Audited accounts can be helpful in the negotiation for sale or admission of a new partner.

(vi) It is an effective safeguard against any undue advantage being taken by a working partner as against the non working partners.

20. Government Expenditure Audit: Audit of government expenditure is one of the major components of government audit conducted by the office of C & AG. The basic standards set for audit of expenditure are to ensure that there is provision of funds authorised by competent authority fixing the limits within which expenditure can be incurred. Briefly, these standards are explained below:

(i) *Audit against Rules & Orders*: The auditor has to see that the expenditure incurred conforms to the relevant provisions of the statutory enactment and is in accordance with the financial rules and regulations framed by the competent authority.

(ii) *Audit of Sanctions*: The auditor has to ensure that each item of expenditure is covered by a sanction, either general or special, accorded by the competent authority, authorising such expenditure.

(iii) *Audit against Provision of Funds*: It contemplates that there is a provision of funds out of which expenditure can be incurred and the amount of such expenditure does not exceed the appropriations made.

(iv) *Propriety Audit*: It is required to be seen that the expenditure is incurred with due regard to broad and general principles of financial propriety. The auditor aims to bring out cases of improper, avoidable, or in fructuous expenditure even though the expenditure has been incurred in conformity with the existing rules and regulations. Audit aims to secure a reasonably high standard of public financial morality by looking into the wisdom, faithfulness and economy of transactions.

(v) *Performance Audit*: This involves that the various programmes, schemes and projects where large financial expenditure has been incurred are being run economically and are yielding results expected of them. Efficiency-cum-performance audit, wherever used, is an objective examination of the financial and operational performance of an organisation, programme, authority or function and is oriented towards identifying opportunities for greater economy, and effectiveness.

PAPER – 7: INFORMATION TECHNOLOGY AND STRATEGIC MANAGEMENT

SECTION – A: INFORMATION TECHNOLOGY

QUESTIONS

1. Define the following terms briefly:
   - (i) Cache Memory
   - (ii) Six Sigma
   - (iii) Virtual Memory
   - (iv) Firewall
   - (v) Multiplexer
   - (vi) Operating System
   - (vii) Business Information System
   - (viii) Process (from a business perspective)
   - (ix) Expert System
   - (x) Identification Cards
2. Differentiate between the following:
   - (i) Client-Server Network and Peer-to-Peer Network
   - (ii) Ring Network and Star Network
   - (iii) Asynchronous and Synchronous Data Transmission
   - (iv) Data Store and Data Flow in Data Flow Diagrams
   - (v) Manual Information Processing Cycle and Computerized Information Processing Cycle
   - (vi) Tacit Knowledge and Explicit Knowledge
   - (vii) Hardware Encryption and Software Encryption
   - (viii) Information and Knowledge
   - (ix) Complex Instruction Set Computer (CISC) and Reduced Instruction Set Computer (RISC)
   - (x) Infrastructure as a Service (IaaS) and Software as a Service (SaaS)
3. Write short note on the following:
   - (i) Bluetooth
   - (ii) TCP/IP
   - (iii) Decision Table

(iv) Mesh Topology

(v) Artificial Intelligence

(vi) Mobile Commerce

(vii) Grid Computing

(viii) Smart Phone

(ix) Micro Architecture

(x) Value Chain Automation

Accounts BPM

4. Discuss the different cycles of an Account Business Process Management.

Controls in BPA

5. Define Controls and discuss their objectives and importance in Business Process Automation.

Internetwork Processors

6. What do you understand by Internetwork Processors? Discuss some of them, in brief.

Information Systems

7. What do you understand by the term "Information System"? Discuss its components.

Business Intelligence

8. Discuss Business Intelligence and its tools.

Business Process Automation

9. Discuss the steps involved in implementing Business Process Automation.

Information System Life Cycle

10. Discuss Information System Life Cycle in detail.

Database Management System

11. What do you understand by the term Database Management System? Discuss its advantages and disadvantages.

Telecommunication Media

12. What is Transmission Media? Discuss its various types.

Network Threats

13. Define Threat. What are various threats to a computer network's security?

Cloud Computing

14. Define Cloud Computing. What are the different types of clouds in a Cloud Computing Environment?

Mapping Systems

15. (a) Draw an E-R Diagram based on the following facts:

A bank records information about its customers and their accounts. A specific account can have many owners (customers), and a specific customer can own an have only one account at most. Information about customers includes their social security number, phone number, name and address. Information about accounts includes account number, type, and balance. Further, every customer can

(b) Analyze the completeness of the following reduced decision table:

	Table X	R1	R2	R3	R4	R5
C1	Condition A	Y	N	N	N	N
C2	Condition B	Y	Y	N	N	N
C3	Condition C	-	N	-	Y	N
C4	Condition D	-	-	-	N	N
A1	Action 1	X		X	X	
A2	Action 2		X			X

(c) An electric supply company charges the following rates for its domestic consumers:

No. of units consumed	Charges/unit (Rs.)
For the first 200 units	1.60
For the next 300 units	2.10
Over 500 units	3.90

Surcharge @ 20% of the bill is to be added to the charges.

Draw a Flow chart for the above, which will read the consumer number and the number of units consumed and print out the total charges with the consumer number and the units consumed.

SUGGESTED ANSWERS/HINTS

1. (i) Cache Memory: Cache (pronounced as cash) is a smaller but faster memory, which stores copies of the data from the most frequently used main memory locations so that processors or registers can access it more rapidly than main memory. It is the property of locality of reference, which allows improving substantially the effective memory access time in a computer system.

   (ii) Six Sigma: Six Sigma is a set of strategies, techniques, and tools for process improvement. It seeks to improve the quality of process outputs by identifying and removing the causes of defects and minimizing variability in manufacturing and business processes.

   (iii) Virtual Memory: Virtual Memory is not a separate device but an imaginary memory area supported by some Operating Systems (for example, Windows) in conjunction with the hardware. If a computer lacks the Random Access Memory (RAM) needed to run a program or operation, Windows uses virtual memory to compensate. Virtual memory combines computer's RAM with temporary space on the hard disk. When RAM runs low, virtual memory moves data from RAM to a space called a paging file thus freeing up RAM to complete its work. Thus, Virtual memory is an allocation of hard disk space to help RAM.

   (iv) Firewall: Firewall is a device that forms a barrier between a secure and an open environment when the latter environment is usually considered hostile, for example, the Internet. It acts as a system or combination of systems that enforces a boundary between more than one networks. In firewalls, access controls are common form of controls encountered in the boundary subsystem by restricting the use of system resources to authorized users, limiting the actions authorized users can take with these resources and ensuring that the users obtain only authentic system resources.

   (v) Multiplexer: A multiplexer is a communications processor that allows a single communications channel to carry simultaneous data transmissions from many terminals. Typically, a multiplexer merges the transmissions of several terminals at one end of a communications channel, while a similar unit separates the individual transmissions at the receiving end.

   (vi) Operating System: An Operating System (OS) is a set of computer programs that manages computer hardware resources and acts as an interface with computer applications programs. The operating system is a vital component of the system software in a computer system. Application programs usually require an operating system to function that provides a convenient environment to users for executing their programs. Some prominent Operating systems used nowadays are Windows 7, Windows 8, Linux, UNIX, etc.

(vii) Business Information System: Business Information Systems (BIS) may be defined as systems integrating Information Technology, people and business. BIS brings business functions and information modules together for establishing effective communication channels which are useful for making timely and accurate decisions and in turn contribute to organizational productivity and competitiveness.

(viii) Process (from a business perspective): From a business perspective, a process is a coordinated and standardized flow of activities performed by people or machines, which can traverse functional or departmental boundaries to achieve a business objective and creates value for internal or external customers.

(ix) Expert System: An Expert System (ES) is a computerized information system that allows non-experts to make decisions comparable to those of an expert. Expert Systems are used for complex or ill-structured tasks that require experience and specialized knowledge in narrow, specific subject areas. The aim of the Expert System is to have a team of seasoned specialists holding industry-wide experience and has leveraged its strengths to plan and execute a miscellaneous variety of projects for Defence, Government, Finance, Telecom, and Engineering sectors.

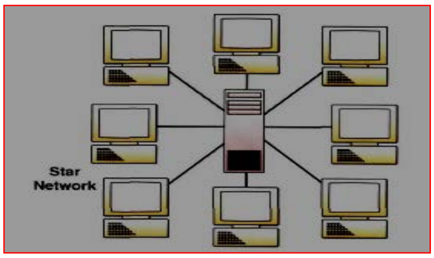
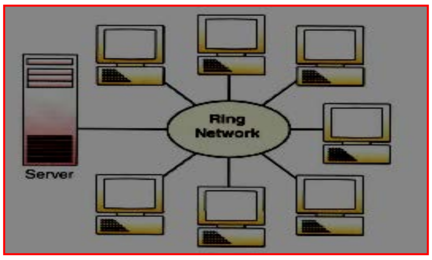
(x) Identification Cards: Identification cards are used to store information required in an authentication process. These cards that are used to identify a user need to go through procedural controls like application for a card, preparation of the card, issue of the card, use of the card and return of the card or card termination phases.

2. (i) Differences between Client Server Network and Peer-to-Peer Network are given below:

Client Server Network	Peer-to-Peer Network
A client computer typically communicates only with servers, not with other clients.	Every computer is equal and can communicate with any other computer on the network to which it has been granted access rights.
A central server handles all security and file transactions.	Each machine shares its own resources and handles its own security.
It is more expensive as it requires a central file server, server software and client licenses.	It is relatively less expensive as it does not require a dedicated machine, server software or special client licenses.
More secure.	Lesser secure as the network control is handed to the end-users.
Backup is centralized on the server; managed by network administrator. Backup by device and media only	Backup is decentralized; managed by users. Backup devices and media are required at each workstation.

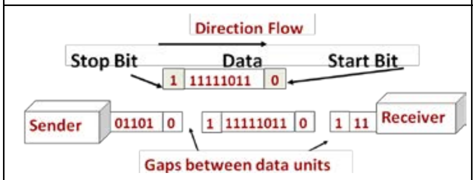
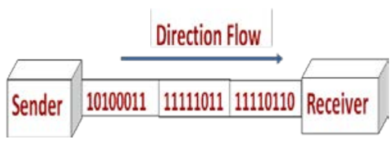
required at server.	
The performance is relatively high as the server is dedicated and does not handle other tasks.	The performance is relatively low.
In case of failure of server, the whole network fails.	No single point of failure in the network.
C/S model relies on the power and stability of a single computer ie. Server.	P2P gives each workstation equivalent capabilities and relies heavily on the power and bandwidth of each individual computer.
Example - Email, network printing, and the World Wide Web.	Example - Napster, Gnutella, Freenet, BitTorrent and Skype.

(ii) Differences between Star Network and Ring Network are given below:

Star Network	Ring Network
The central unit (server) in the network acts as the traffic controller among all the other computers tied to it under centralized approach.	Local computer processors are tied together sequentially in a ring with each device being connected to two other devices under a decentralized approach.
	
A node failure does not bring down the entire network. Failure of server affects the whole network.	Failure of one computer on the network can affect the whole network.
New nodes can be added easily without affecting rest of the network.	Moving, adding and changing the nodes can affect the network.
A star network is well suited to companies with one large data processing facility shared by a number of smaller departments.	Ring networks offer high performance for a small number of workstations or for larger networks where each station has a similar workload.
It is easier to diagnose network	It is difficult to troubleshoot a ring

problems through a central hub.	network.

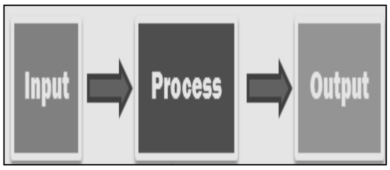
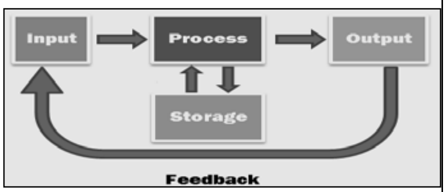
(iii) Differences between Asynchronous Data Transmission and Synchronous Data Transmission are as follows:

Asynchronous Transmission	Synchronous Transmission
The timing of signal is unimportant, Receiver accepts bytes with no regard to rhythm in which it is sent.	The bit stream combined into "frames" sent at a fixed rate using same clock signals at both sides.
Each data word is accompanied by Start-Stop bits.	Allows characters to be sent down the line without Start-Stop bits.
To alert the receiver to the arrival of new group of bytes, an extra bit 0, called Start bit is added in the beginning of the byte and a Stop bit 1, appended at the end of the byte to let receiver know that the byte is finished.	Each byte is transmitted without a gap, thus timing is very important at receiver's end to accurately count the number of bits arriving.
	
Extra Start-Stop bits slow down the transmission process relatively.	Transmission is faster as in absence of Start-Stop bits, many data words can be transmitted per second.
It is relatively cheaper.	The synchronous device is more expensive to build as it must be smart enough to differentiate between the actual data and the special synchronous characters.
More reliable as the Start-Stop bits ensure that the sender and the receiver remain in step with one another.	Chances of data loss are relatively higher.
It is less efficient.	It is more efficient.

(iv) Data Store: A Data Store is where a process stores data between processes for later retrieval by that same process or another one. Files and tables are considered data stores. In Data Flow Diagrams, Data stores are usually drawn as a rectangle with the right hand side missing and labeled by the name of the data storage area it represents, though different notations do exist.

Data Flow: Data flow is the movement of data between the entity, the process and the data store. Data flow portrays the interface between the components of the DFD. The flow of data in a DFD is named to reflect the nature of the data used (these names should also be unique within a specific DFD). Data flow is represented by an arrow, where the arrow is annotated with the data name.

(v) Differences between Manual Information Processing cycle and Computerized Information Processing Cycle are as follows:

Manual Information Processing Cycle	Computerized Information Processing Cycle
These are the systems where the level of manual intervention is very high.	These are systems where computers are used at every stage of transaction processing.
The components of a manual information processing cycle include: Input, Processing and Output.	The components of a computerized information processing cycle include: Input, Processing, Storage and Output.
	
As the level of human intervention is very high, the quality of information generated from these systems is prone to flaws such as delayed information, inaccurate information, incomplete information and low levels of detail.	As the processing is computerized the quality of information generated from these systems is timely, accurate, fast and reliable.
Eg. valuation of exam papers, teaching, operations in operation theatres, ticket checking by railway staff in trains, buying of grocery, billing done by small medical shops, people maintaining books manually, etc.	Eg. Billing in shopping malls, Air Ticket reservation etc.

(vi) Differences between Explicit Knowledge and Tacit Knowledge are as follows:

Explicit Knowledge	Tacit Knowledge
Explicit knowledge is that knowledge	Tacit knowledge, on the other hand,

which can be formalized easily and as a consequence is easily available across the organization.	resides in a few often-in just one person and hasn't been captured by the organization or made available to others.
Explicit knowledge is articulated, and represented as spoken words, written material and compiled data.	Tacit knowledge is unarticulated and represented as intuition, perspective, beliefs, and values that individuals form based on their experiences.
This type of knowledge is codified, easy to document, transfer and reproduce.	It is personal, experimental and context-specific. It is difficult to document and communicate the tacit knowledge.
For example - Online tutorials, Policy and procedural manuals.	For example - hand-on skills, special know-how, employee's experiences.

(vii) Hardware Encryption: Hardware Encryption devices are available at a reasonable cost, and can support high speed traffic. If the Internet is being used to exchange information among branch offices or development collaborators, for instance, use of such devices can ensure that all traffic between these offices is secure.

Software Encryption: Software Encryption is typically employed in conjunction with specific applications. Certain electronic mail packages, for example, provide encryption and decryption for message security.

(viii) Differences between Information and Knowledge are given as follows:

Information	Knowledge
Information is piecemeal, fragmented and particular.	Knowledge is structured, coherent, and often universal.
Information is timely, transitory, and may even be short-lived.	Knowledge is of enduring significance.
Information is a flow of messages.	Knowledge is a stock, largely resulting from the flow, in the sense that the "input" of information may affect the stock of knowledge by adding to it, restructuring it, or changing it in any way.
Information is acquired by being told.	Knowledge can be acquired by thinking. Thus, new knowledge can be acquired without new information being received.

(ix) Differences between CISC and RISC are given as follows:

CISC	RISC
CISC stands for Complex	RISC stands for Reduced Instruction Set

Instruction Set Computer.	Computer.
CISC chips do all of the processing themselves.	RISC chips distribute some of their processing to other chips.
Emphasis on hardware.	Emphasis on software.
Includes multi-clock, complex instructions.	Includes single-clock, reduced instruction only.
CISC chips are more common in computers that have a wider range of instructions to execute.	RISC chips are finding their way into components that need faster processing of a limited number of instructions, such as printers and games machines.
The CISC approach attempts to minimize the number of instructions per program, sacrificing the number of cycles per instruction.	RISC does the opposite, reducing the cycles per instruction at the cost of the number of instructions per program.
Small code sizes, high cycles per second.	Low cycles per second, large code sizes.
Memory-to-Memory: "LOAD" and "STORE" incorporated in instructions.	Register-to-Register: "LOAD" and "STORE" are independent instructions.
Relatively lesser RAM is required.	Because there are more lines of code, more RAM is needed to store the assembly level instructions. The compiler must also perform more work to convert a high-level language statement into code of this form.
CISC chips have an increasing number of components and an ever increasing instruction set and so are always slower and less powerful at executing “common” instructions.	RISC chips have fewer components and a smaller instruction set, allowing faster accessing of “common” instructions.
After a CISC-style "MULT" command is executed, the processor automatically erases the registers. If one of the operands needs to be used for another computation, the processor must re-load the data from the memory bank into a register.	In RISC, the operand will remain in the register until another value is loaded in its place.
CISC chips are relatively slow per instruction, but use fewer instructions. Optimized for the	RISC chips are fewer, and relatively simpler and faster than the large, complex and slower CISC instructions. However, more

programmer.	instructions are needed to accomplish a task. It's easier to write powerful optimized compilers, since fewer instructions exist.

(x) Infrastructure as a Service (IaaS): It is the foundation of cloud services. It provides clients with access to server hardware, storage, bandwidth and other fundamental computing resources. The service is typically paid for on a usage basis. The service may also include dynamic scaling so that if the customer needs more resources than expected, s/he can get them on the fly (probably to a given limit). It provides access to shared resources on need basis, without revealing details like location and hardware to clients.

Software as a Service (SaaS): It includes a complete software offering on the cloud. Users can access a software application hosted by the cloud vendor on pay-per-use basis. This is a well-established sector. SaaS is a model of software deployment where an application is hosted as a service provided to customers across the Internet. By removing the need to install and run an application on a user's own computer. It is seen as a way for businesses to get the same benefits as commercial software with smaller cost outlay. SaaS can alleviate the burden of software maintenance and support but users relinquish control over software versions and requirements.

3. (i) Bluetooth: Bluetooth is a wireless technology (low-power, short-range radio signal) standard for exchanging data over short distances up to 50 meters (164 feet) from fixed and mobile devices, creating Personal Area Networks (PANs) with high levels of security. It is a feature which is used every day through a number of compatible devices like USB, handheld PDA, phone headset and most popularly the mobile phone. Few devices that utilize Bluetooth technology are Keyboards and mice, Printers, Cell phones and headsets, PDAs (Personal Digital Assistants), Desktop and laptop computers, Digital cameras, and Remotes: replacing IR (infrared).Through the use of a mobile phone; we can send pictures, videos, exchange business cards and also transfer files to our PC. Both data and voice transmissions can be sent and received through the use of short range networks.

(ii) TCP/IP: The Internet uses a system of telecommunications protocol suite called as Transmission Control Protocol/Internet Protocol (TCP/IP). TCP/IP consists of five levels of protocols that can be related to the seven layers of the OSI architecture. TCP/IP is used by the Internet and by all Intranets and extranets. Many companies and other organizations are also converting their client/server networks to TCP/IP. Five layers of TCP/IP are as follows:

- Application or Process layer: This layer provides communications services for end user applications and appropriate data transmission formats and codes and supports the accomplishment of telecommunications sessions.

- **Host-to-Host Transport layer:** This layer supports the organization and transfer of data between nodes in the network.
- **Internet Protocol (IP):** This layer provides appropriate routing by establishing connections among network links.
- **Network Interface:** This layer supports error-free organization and transmission of data in the network.
- **Physical layer:** This layer provides physical transmission of data on the telecommunications media in the network.

(iii) **Decision Table:** A Decision Table is a table which may accompany a flowchart, defining the possible contingencies that may be considered within the program and the appropriate course of action for each contingency. A Decision Table is divided into four quadrants:

Condition Stub	Condition Entries
Action stub	Action Entries

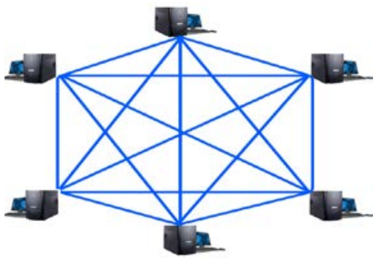
(a) **Condition Stub** - which comprehensively lists the comparisons or conditions;

(b) **Action Stub** - which comprehensively lists the actions to be taken along the various program branches;

(c) **Condition Entries** - which list in its various columns the possible permutations of answer to the questions in the conditions stub; and

(d) **Action Entries** - which lists, in its columns corresponding to the condition entries the actions contingent upon the set of answers to questions of that column.

(iv) **Mesh Topology:** In this topology, there is random connection of nodes using communication links. A mesh network may be fully connected as shown in Figure or connected with only partial links. In fully interconnected topology, each node is connected by a dedicated point to point link to every node. The reliability is very high as there are always alternate paths available if direct link between two nodes is down or dysfunctional. Fully connected networks are not very common because of the high cost. Only military installations, which need high degree of redundancy, may have such networks, that too with a small number of nodes.



Advantages of mesh network are as under:

- Yields the greatest amount of redundancy in the event that if one of the nodes fails, the network traffic can be redirected to another node.
- Network problems are easier to diagnose.

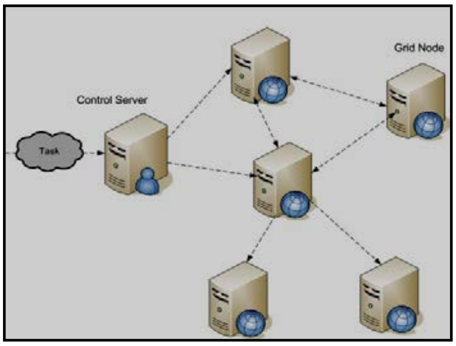
Disadvantage of mesh network is its high cost of installation and maintenance (more cable is required than any other configuration).

(v) Artificial Intelligence: Artificial Intelligence (AI) is the vicinity of computer science focusing on creating machines that can fit into place on behaviours that humans regard as intelligent. It is a research field that studies how to comprehend the intelligent human behaviours on a computer. The decisive objective of AI is to make a computer that can discover, sketch, and crack problems in parallel. A significant driver for any application of artificial intelligence is fresh and innovative code.

The subject of Artificial Intelligence spans a wide horizon dealing with various kinds of knowledge representation schemes, different techniques of intelligent search, various methods for resolving uncertainty of data and knowledge, different schemes for automated machine learning and many others. Expert Systems, Pattern Recognition, Natural language processing are some of the various purposes on which AI may be applied.

(vi) Mobile Commerce: Mobile Commerce (m-Commerce) is about the explosion of applications and services that are becoming accessible from Internet-enabled mobile devices. It involves new technologies, services and business models. M-commerce is the buying and selling of goods and services through wireless handheld devices such as cellular telephone and Personal Digital Assistants (PDAs). m-Commerce enables users to access the Internet without needing to find a place to plug in. Some of the industries that are affected by m-commerce include Financial Services, Telecommunications, Service/Retail and Information Services.

(vii) Grid Computing: Grid Computing is a computer network in which each computer's resources are shared with every other computer in the system. A Grid Computing System can be as simple as a collection of similar computers running on the same operating system or as complex as inter-networked systems comprised of every computer platform we can think of. Processing power, memory and data storage are all community resources that authorized users can tap into and leverage for specific tasks through a typical grid model as shown in the figure.



In the ideal grid computing system, every resource is shared, turning a computer network into a powerful supercomputer. Every authorized computer would have access to enormous processing power and storage capacity.

(viii) Smart Phone: A Smart Phone is a mobile phone built on a mobile operating system, with more advanced computing capability connectivity than a feature phone. A Smart Phone could be considered to be the combination of the traditional PDA and cellular phone, with a bigger focus on the cellular phone part. This handheld device integrates mobile phone capabilities with the more common features of a handheld computer or PDA. Smartphone allows users to store information, e-mail and install programs, along with using a mobile phone in one device. Modern smart phones include high-resolution touch screens and web browsers that display standard web pages as well as mobile-optimized sites. High-speed data access is provided by Wi-Fi and mobile broadband.

(ix) Micro Architecture: Also known as Computer organization, it is a lower level detailed description of the system that is sufficient for completely describing the resources and methods used to achieve architecture specification of the computing system, and how they are inter-connected and inter-operated in order to implement the ISA. The term typically includes the way in which these resources are organized as well as the design techniques used in the processor to reach the target cost and performance goals. The Micro architecture can be seen as how the Instruction Set Architecture does and what it does. It's how everything is ultimately organized on the chip or processor.

(x) Value Chain Automation: Value Chain refers to separate activities which are necessary to strengthen an organization's strategies and are linked together both inside and outside the organization. It is defined as a chain of activities that a firm operating in a specific industry performs in order to deliver a valuable product or service for the market. The idea of the Value Chain is based on the process view of organizations, the idea of seeing a manufacturing (or service) organization as a system, made up of subsystems each with inputs, transformation processes and outputs. For example - Value chain of a manufacturing organization comprises of primary activities that include inbound logistics, operations, outbound logistics, marketing and sales, and services; and the supportive activities that relate to procurement, human resource management, technology development and infrastructure. Some of the business functions of the value chain are - Research and development; Design of products, services, or processes; Production; Marketing and sales; Distribution and Customer service.

4. The processing cycles of an Accounts Business Process Management are namely Financing Cycle, Revenue Cycle, Expenditure Cycle, Human Resource and the General Ledger & Reporting Systems and the flow of data between them. These systems are discussed as follows:

(i) **Financing Cycle:** A transaction processing cycle combines one or more types of transactions having related features or similar objectives. The cycle consists of a set of transactions leading to the recognition of a major economic event on the financial statements. It is through the study of transaction cycles that we gain a clear view of a firm's processing framework.

(ii) **Revenue Cycle:** It includes transactions surrounding the recognition of revenue involving accounts like Sales, Accounts Receivable, Inventory and General Ledger. It involves capturing and recording of customer orders; shipment of the goods; recording of the cost of goods sold; the billing process and the recording of sales and accounts receivable; and capturing and recording of cash receipts. Common Source Documents & functions of Revenue Cycle are as follows:

Source Document	Function
Sales Order	Record Customer Order
Delivery Ticket	Record Delivery to Customer
Remittance Advice	Receive Cash
Deposit Slip	Record Amounts Deposited
Credit Memo	Support Adjustments to Customer Accounts

(iii) **Expenditure Cycle:** It includes transactions surrounding the recognition of expenditures involving accounts like Purchases, Accounts Payable, Cash Disbursements, Inventory and General Ledger. It includes preparation and recording of purchase orders; receipt of goods and the recording of the cost of inventory; receipt of vendor invoices; recording of accounts payable and preparation and recording of cash disbursements. The cycle also includes the preparation of employee pay-checks and the recording of payroll activities. Common Source Documents & functions of Revenue Cycle are as follows:

Source Document	Function
Purchase Requisition	Request that purchasing department order goods.
Purchase Order	Request goods from vendors.
Receiving Report	Record receipt of merchandise.
Check	Pay for items.

(iv) **Human Resource Cycle:** Common Source Documents & Functions are as follows:

Source Document	Function
W4 forms	Collect employee withholding data.
Time cards	Record time worked by employees.
Job time tickets	Record time spent on specific jobs.

(v) **General Ledger & Reporting System:** Common Source Document and its function is as follows:

General Ledger and Reporting System	
Journal Voucher	Record entry posted to general ledger.

(vi) **Data Processing Cycle:** In the Data Processing Cycle, the processes of business activities about which data must be collected and processed are identified. Further, the emphasize could be on the activities, resources affected by that event, the agents who participate in that event; where the event could be the Input, Output, Processing, Storage, Alerts, Controls and Feedback. All the above cycles of processing involves data processing activities which has been updated and stored. The stored information has details about the resources affected by the event and agents who participated in the activity.

5. **Controls:** Controls are defined as policies, procedures, practices and organization structure that are designed to provide reasonable assurance that business objectives are achieved and undesired events are prevented or detected and corrected.

Controls' Objectives

Major controls' objectives are given as follows:

- **Authorization** – This ensures that all transactions are approved by responsible personnel in accordance with their specific or general authority before the transactions are recorded.
- **Completeness** – This ensures that no valid transactions have been omitted from the accounting records.
- **Accuracy** - This ensures that all valid transactions are accurate, consistent with the originating transaction data, and information is recorded in a timely manner.
- **Validity** - This ensures that all recorded transactions fairly represent the economic events that actually occurred, are lawful in nature, and have been executed in accordance with management's general authorization.
- **Physical Safeguards and Security** - This ensures that access to physical assets and information systems are controlled and properly restricted to authorized personnel.
- **Error Handling** - This ensures that errors detected at any stage of processing receive prompts corrective action and are reported to the appropriate level of management.
- **Segregation of Duties** - This ensures that duties are assigned to individuals in a manner that ensures that no one individual can control both the recording function and the procedures relative to processing a transaction.

Importance of Controls in BPA

In today's computerized information systems, most of the business processes are being automated. Enterprises are increasingly relying on IT for business information and transaction processing. The innovations in IT components such as hardware, software, networking technology, communication technology and ever-increasing bandwidth are leading to evolution completely new business models.

All these new business models and new methods presume that the information required by business managers is available all the time and is accurate. However, there is a need to ensure that all information that is generated from system is accurate, complete and reliable for decision making, hence the requirement for proper controls.

6. Internetwork Processors: Telecommunications networks are interconnected by special-purpose communications processors called Internetwork Processors such as Switches, Routers, Hubs, Bridges, Repeaters and Gateways.

   - Switch - Switch is a communications processor that makes connections between telecommunications circuits in a network so that a telecommunications message can reach its intended destination.
   - Router – Router is a communications processor that interconnects networks based on different rules or protocols, so that a telecommunications message can be routed to its destination.
   - Hub – Hub is a port-switching communications processor. This allows for the sharing of the network resources such as servers, LAN workstations, printers, etc.
   - Bridge – Bridge is a communications processor than connects numerous Local Area Networks (LAN) that have the same set of communication rules or protocols. They can only be used to connect networks of the same type. It magnifies the data transmission signal while passing data from one LAN to another.
   - Repeater – Repeater is a communications processor that boosts or amplifies the signal before passing it to the next section of cable in a network.
   - Gateway – Gateway is a communications processor that connects networks that use different communication architectures.

7. Information System: Information System (IS) is a combination of people, hardware, software, communication devices, network and data resources that processes (can be storing, retrieving, transforming information) data and information for a specific purpose. The system needs inputs from user (key in instructions and commands, typing, scanning) which will then be processed (calculating, reporting) using technology devices such as computers, and produce output (printing reports, displaying results) that will be sent to another user or other system via a network and a feedback method that controls the operation. In general, any specific Information System aims to support operations, management and decision-making.

Components of Information System

The main aim and purpose of each Information System is to convert the data into information which is useful and meaningful. This process consists of four basic concepts:

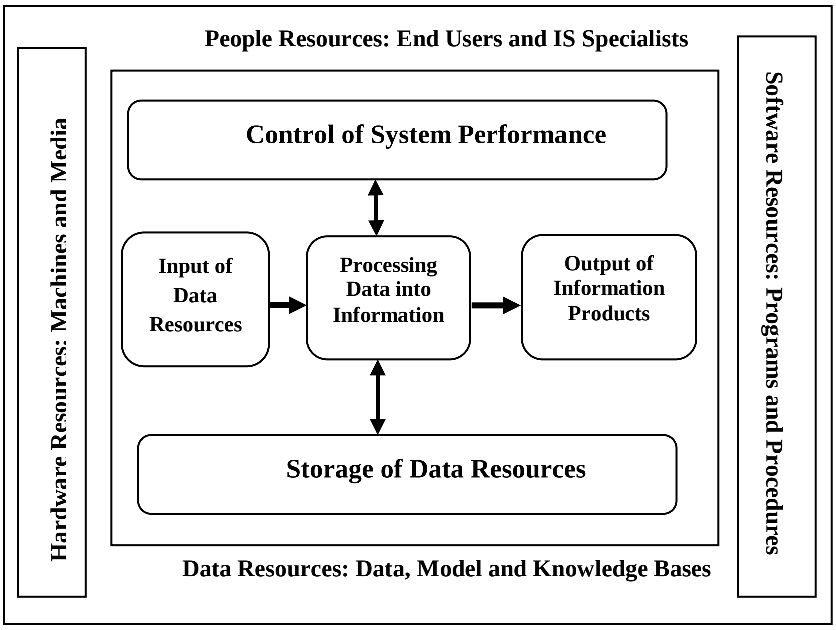
(i) People, Hardware, Software, and Data are four basic resources of information systems;

(ii) Human Resources consist of end users and IT specialists; Hardware involves machines and media; Software Resources consist of programs and procedures; and Data Resources include data, model, and knowledge base;

(iii) A Process is used to convert data into information for end users;

(iv) Information Processes consist of input, processing, output, storage, and control processes.

All components of information systems are mutually connected and cannot exist individually. The relationship between separated components is defined for best process efficiency. The output could be in terms of Printing, Reports, Graphics; Input can be data, information and instructions; Processing may involve calculations, programming and storing; Controls could be related to decision-making and the feedback.



Components of Information System

8. Business Intelligence: Business Intelligence (BI) may be defined as the delivery of accurate, useful information to the appropriate decision makers within the necessary time frame to support effective decision making for business processes. BI is comprised of

information that contains patterns, relationships, and trends about customers, suppliers, business partners and employees. BI is essentially timely, accurate, high-value, and actionable business insights, and the work processes and technologies used to obtain them. Business intelligence systems process, store and provide useful information to the user who need it, when they need it. BI can handle large amounts of information to help identify and develop new opportunities. Making use of new opportunities and implementing an effective strategy can provide a competitive market advantage and long-term stability.

Business Intelligence Tools

Business Intelligence tools are a type of software that is designed to retrieve, analyze and report data. Some of the key Business Intelligence tools are given as follows:

- Simple Reporting and Querying: This involves using the data warehouse to get response to the query: "Tell me what happened." The objective of a BI implementation is to turn operational data into meaningful knowledge. This requires that BI must be connected with the enterprise data and all the necessary data is available in one place, in one common format. Data warehousing (DW) provides the perfect architecture to combine all the data dispersed throughout the enterprise in different applications in a variety of formats, on a range of hardware, which could be anywhere to be cleaned up, summarized, converted and integrated into one common format and available centrally for further processing. There are reporting tools used to arrange information into a readable format and distribute it to the people who need it.
- Business Analysis: This involves using the data to get response to the query: "Tell me what happened and why." Business analysis refers to presenting visualizing data in a multidimensional manner. Business analysis allows the user to plot data in row and column coordinates to further understand the intersecting points. ETL (Extract, Transform, Load) tools bring in data from outside sources, transform it to meet business specified operational needs, and then load the results into the company database. Metadata tools tools gather and analyze metadata, helping to increase data quality.
- Dashboards: This involves using the information gathered from the data warehouse and making it available to users as snapshots of many different things with the objective of getting response to the query: "Tell me a lot of things, but without too much effort". Dashboards are flexible tools that can be bent into as many different shapes as per user requirements. It includes a collection of graphs, reports, and KPIs that can help monitor such business activities as progress on a specific initiative.
- Scorecards: This involves providing a visual representation of the enterprise strategy by taking critical metrics and mapping them to strategic goals throughout the enterprise. Scorecards offer a rich, visual gauge to display the performance of

specific initiatives, business units, or the enterprise as a whole and the individual goals in the context of larger enterprise strategy. Scorecards distil information into a small number of metrics and targets and provide users with an at -a-glance perspective of information. A scorecard has a graphical list of specific, attainable strategic milestones, combined with metrics that serve as benchmarks. Specific measures on how well the company has actually performed specified activities are linked in the scorecard with graphical display highlighting the status of each goal.

- **Data Mining or Statistical Analysis:** This involves using statistical, artificial intelligence, and related techniques to mine through large volumes of data and providing knowledge without users even having to ask specific questions. The objective is to provide interesting and useful information to users by design even without their querying. Data Mining involves data analysis for discovering useful patterns that are "hidden" in large volume of diverse data.

9. The steps in implementing Business Process Automation are discussed as below:

(i) **Step 1: Define why we plan to implement a BPA?**

The primary purpose for which an enterprise implements automation may vary from enterprise to enterprise. A list of generic reasons for going for BPA may include any or combination of the following:

- Errors in manual processes leading to higher costs.
- Payment processes not streamlined, due to duplicate or late payments, missing early pay discounts, and losing revenue.
- Paying for goods and services not received.
- Poor debtor management leading to high invoice aging and poor cash flow.
- Not being able to find documents quickly during an audit or lawsuit or not being able to find all documents.
- Lengthy or incomplete new employee or new account on-boarding.
- Unable to recruit and train new employees, but where employees are urgently required.
- Lack of management understanding of business processes.
- Poor customer service.

(ii) **Step 2: Understand the rules / regulation under which enterprise needs to comply with?**

One of the most important steps in automating any business process is to understand the rules of engagement, which include following the rules, adhering to regulations and following document retention requirements. This governance is established by a combination of internal corporate policies, external industry regulations and local, state, and central laws. Regardless of the source, it is important to be aware of their existence and how they affect the documents that drive the processes. It is important to understand that laws may require documents to be retained for specified number of years and in a specified format. Entity needs to ensure that any BPA adheres to the requirements of law.

(iii) Step 3: Document the process, we wish to automate

At this step, all the documents that are currently being used need to be documented. The following aspects need to be kept in mind while documenting the present process:

- What documents need to be captured?
- Where do they come from?
- What format are they in: Paper, FAX, email, PDF etc.?
- Who is involved in processing of the documents?
- What is the impact of regulations on processing of these documents?
- Can there be a better way to do the same job?
- How are exceptions in the process handled?

The benefit of the above process for user and entity being that it provides clarity on the process, helps to determine the sources of inefficiency, bottlenecks, and problems and allows tore-design the process to focus on the desired result with workflow automation.

(iv) Step 4: Define the objectives/goals to be achieved by implementing BPA

Once the above steps have been completed, entity needs to determine the key objectives of the process improvement activities – SMART (Specific: Clearly defined, Measurable: Easily quantifiable in monetary terms, Attainable: Achievable through best efforts, Relevant: Entity must be in need of these, and Timely: Achieved within a given time frame.)

(v) Step 5: Engage the business process consultant

This is again a critical step to achieve BPA. To decide as to which company/ consultant to partner with, depends upon the following:

- Objectivity of consultant in understanding/evaluating entity situation.
- Does the consultant have experience with entity business process?
- Is the consultant experienced in resolving critical business issues?
- Whether the consultant is capable of recommending and implementing a combination of hardware, software and services as appropriate to meeting enterprise BPA requirements?

- Does the consultant have the required expertise to clearly articulate the business value of every aspect of the proposed solution?

(vi) Step 6: Calculate the Return on Investment (RoI) for project

The right stakeholders need to be engaged and involved to ensure that the benefits of BPA are clearly communicated and implementation becomes successful. Hence, the required business process owners have to be convinced so as to justify the benefits of BPA and get approval from senior management. Some of the methods for justification of a BPA proposal may include cost savings in terms of eliminating fines to be paid by entity due to delays, cost of audits and lawsuits and reduced cost of space regained from paper, file cabinets; reduction in required manpower leading to no new recruits; ensuring complete documentation for all new accounts; taking advantage of early payment discounts and eliminating duplicate payments; ensuring complete documentation for all new discounts; ensuring complete documentation for all new accounts; building business by providing superior levels of customer service and charging for instant access to records etc.

(vii) Step 7: Developing the BPA

Once the requirements have been document, ROI has been computed and top management approval to go ahead has been received, the consultant develops the requisite BPA. The developed BPA needs to meet the objectives for which the same is being developed.

(viii) Step 8: Testing the BPA

Once developed, it is important to test the new process to determine how well it works and identify where additional "exception processing" steps need to be included. The process of testing is an iterative process, the objective being to remove all problems during this phase.

Testing allows room for improvements prior to the official launch of the new process, increases user adoption and decreases resistance to change. Documenting the final version of the process will help to capture all of this hard work, thinking and experience which can be used to train new people.

10. Information System Life Cycle: This is commonly referred as Software/System Development Life Cycle (SDLC) which is a methodology used to describe the process of building information systems. It is the logical starting point in the entire life cycle of a computerized system. SDLC framework provides a sequence of activities for system designers and developers to follow. It consists of a set of steps or phases in which each phase of the SDLC uses the results of the previous one. This serves as a guideline to the designer, who seeks to use it as template while working on a project development.

    An SDLC adheres to important phases that are essential for developers, such as Investigation, Analysis, Design, Implementation and Maintenance and Review; and are given as follows:

Phase 1: System Investigation

This phase examines that 'What is the problem and is it worth solving'? We would be doing a feasibility study under the following dimensions:

- **Technical feasibility:** Does the technology exist to implement the proposed system or is it a practical proposition?
- **Economic feasibility:** Is proposed system cost-effective: if benefits do not outweigh costs, it's not worth going ahead?
- **Legal feasibility:** Is there any conflict between the proposed system and legal requirements?
- **Operational feasibility:** Are the current work practices and procedures adequate to support the new system?
- **Schedule feasibility:** How long will the system take to develop, or can it be done in a desired time-frame?

Phase 2: System Analysis

This phase examines that 'What must the Information System do to solve the problem'? System analyst would be gathering details about the current system and will involve:

- **Interviewing staff:** at different levels from end-users to senior management;
- **Examine current business:** systems documents and output including current order documents, computer system procedures and reports used by operations and senior management;
- **Sending out questionnaires:** that have to be carefully constructed to elicit unambiguous answers; and
- **Observation of current procedures:** by spending time in various departments. A time and motion study can show where procedures could be more efficient or to detect bottlenecks.

The Systems Analyst will examine data and information flows in the enterprise using data flow diagrams; establish what the proposed system will actually do (not how it will do it); analyze costs and benefits; outline system implementation options. (e.g. in-house or using consultants); consider possible hardware configurations; and make recommendations.

Phase 3: System Designing

This phase examines that 'How will the Information System do what it must do to obtain the solution to the problem'? This phase specifies the technical aspects of a proposed system in terms of:

- **Hardware platform:** Computer, network capabilities, input, storage and output devices;

- **Software:** Programming language, package and database;
- **Outputs:** Report layouts and screen designs;
- **Inputs:** Documents, screen layouts and validation procedures;
- **User interface:** How users will interact with the computer system;
- **Modular design:** Of each program in the application;
- **Test plan:** Develop test data;
- **Conversion plan:** How the new system is to be implemented; and
- **Documentation:** Including systems and operations documentation. Later, a user manual will be produced.

Phase 4: System Implementation

This phase examines that 'How will the Solution be put into effect'? This phase involves the following steps:

- Coding and testing of the system;
- Acquisition of hardware and software; and
- Either installation of the new system or conversion of the old system to the new one.

In Installation, there are following major activities:

- Installing the new hardware, which may involve extensive re-cabling and changes in office layouts;
- Training the users on the new system; and
- Conversion of master files to the new system or creation of new master files.

In Conversion, there are following major activities:

- **Direct Changeover:** The user stops using the old system one particular day and starts using the new system from thereon, usually over a weekend or during a slack period.
- **Parallel Conversion:** The old system continues alongside the new system for a few weeks or months.
- **Phased Conversion:** Used with larger systems that can be broken down into individual modules which can be implemented separately at different times.
- **Pilot Conversion:** New system will first be used by only a portion of the enterprise, for example at one branch or factory.

Phase 5: System Maintenance and Review

This phase evaluates results of solution and modifies the system to meet the changing needs. Post implementation review would be done to address programming amendments, adjustment of clerical procedures, modification of Reports, and request for new programs.

System maintenance could be with following different objectives:

- **Perfective Maintenance:** This implies that while the system runs satisfactorily, there is still room for improvement.
- **Adaptive Maintenance:** All systems will need to adapt to changing needs within a company.
- **Corrective Maintenance:** Problems frequently surface after a system has been in use for a short time, however thoroughly it was tested. Any errors must be corrected.

This is often the longest of the stages since it is an on-going process having some sort of long term continuum.

11. **Database Management System:** Database Management System are software that aid in organizing, controlling and using the data needed by the application programme. They provide the facility to create and maintain a well-organized database. Applications access the DBMS, which then accesses the data.

In other words, DBMS may be defined as a computerized record keeping. Database is just an electronic filing cabinet i.e., a collection of computerized data files that helps us to do various operations on the files, such as adding new files to database, deleting existing files from database, inserting data in existing files, modifying data in existing files, deleting data in existing files, and retrieving or querying data from existing files. Oracle, My SQL, SQL Servers and DB2 are some of the commercially available Data Base Management Systems.

Advantages of a DBMS

Major advantages of DBMS are given as follows:

- **Permitting data sharing:** One of the principle advantages of a DBMS is that the same information can be made available to different users.
- **Minimizing Data Redundancy:** In DBMS, duplication of information or redundancy, if not eliminated, is carefully controlled or reduced i.e. there is no need to repeat the same data over and over again. Minimizing redundancy can therefore significantly reduce the cost of storing information on hard drives and other storage devices
- **Integrity can be maintained:** Data integrity is maintained by having accurate, consistent, and up-to-date data. Updates and changes to the data only have to be made in one place in DBMS ensuring Integrity. The chances of making a mistake increase if the same data needs to be changed at several different places than making the change in one place.

- **Program and file consistency:** Using a DBMS, file formats and programs are standardized. This makes the data files easier to maintain because the same rules and guidelines apply across all types of data. The level of consistency across files and programs also makes it easier to manage data when multiple programmers are involved.
- **User-friendly:** DBMS makes the data access and manipulation easier for the user. DBMS also reduce the reliance of users on computer experts to meet their data needs.
- **Improved security:** DBMSs allow multiple users to access the same data resources which could lead to risk to an enterprise if not controlled. Security constraints can be defined i.e. Rules can be built to give access to sensitive data. Some sources of information should be protected or secured and only viewed by select individuals. Through the use of passwords, database management systems can be used to restrict data access to only those who should see it.
- **Achieving program/data independence***:* In a DBMS data does not reside in applications but data bases program & data are independent of each other.
- **Faster application development:** In the case of deployment of DBMS, application development becomes fast. The data is already therein databases, application developer has to think of only the logic required to retrieve the data in the way a user needs.

Disadvantages of a DBMS

There are basically two major downsides to using DBMSs. One of these is cost (both system and user training), and the other is the threat to data security. These are given as under:

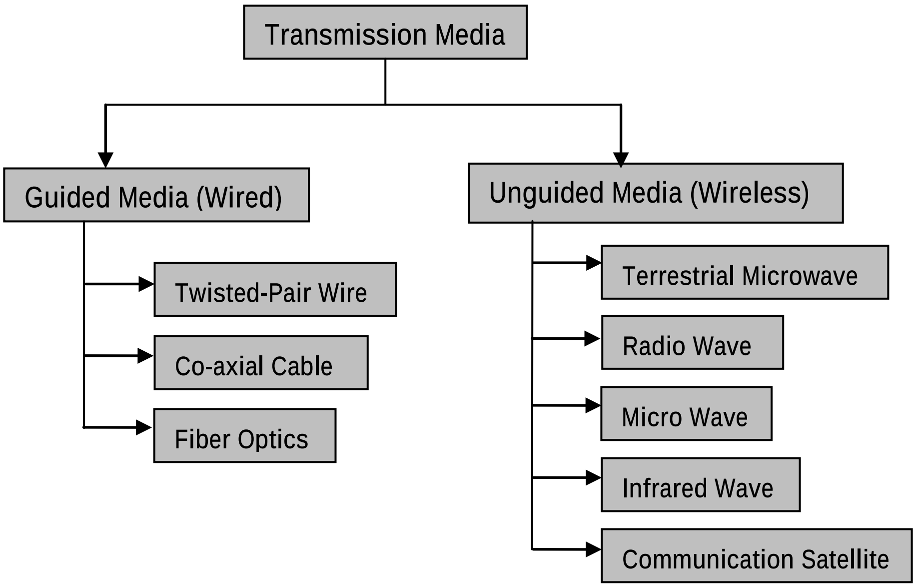
- **Cost:** Implementing a DBMS system can be expensive and time-consuming, especially in large enterprises. Training requirements alone can be quite costly.
- **Security:** Even with safeguards in place, it may be possible for some unauthorized users to access the database. If one gets access to database then it could be an all or nothing proposition.

12. Transmission Media connects the message source with the message receiver by means of Guided or Unguided Media.

    Guided Media/Bound Media: Guided Transmission Media uses a "cabling" system that guides the data signals along a specific path. Some of the common examples of guided media are Twisted Pair, Coaxial cable and Fibre optics.

    - **Twisted-Pair Wire:** Twisted-pair is ordinary telephone wire, consisting of copper wire twisted into pairs. It is the most widely used media for telecommunications and is used for both voice and data transmissions. It is used extensively in home and office telephone systems and many LANs and WANs.

- **Coaxial Cable:** This telecommunication media consists of copper or aluminium wire wrapped with spacers to insulate and protect it. Coaxial cables can carry a large volume of data and allows high-speed data transmission used in high-service metropolitan areas for cable TV systems, and for short-distance connection of computers and peripheral devices. It is used extensively in office buildings and other work sites for local area networks.
- **Fibre Optics:** This media consists of one or more hair-thin filaments of glass fibre wrapped in a protective jacket. Signals are converted to light form and fired by laser in bursts. Optical fibres can carry digital as well as analog signals and provides increased speed and greater carrying capacity than coaxial cable and twisted-pair lines.



Unguided Media/Unbound Media: Unguided Transmission Media consists of a means for the data signals to travel but nothing to guide them along a specific path. The data signals are not bound to a cabling media. Some of the common examples of unguided media are Terrestrial Microwave, Radio Waves, Micro Waves, Infrared Waves and Communication Satellites.

- **Terrestrial Microwave:** Terrestrial microwave media uses the atmosphere as the medium through which to transmit signals and is used extensively for high-volume as well as long-distance communication of both data and voice in the form of electromagnetic waves.
- **Radio Waves:** Radio waves are an invisible form of electromagnetic radiation that varies in wavelength from around a millimeter to 100,000 km, making it one of the

widest ranges in the electromagnetic spectrum. Radio waves are most commonly used transmission media in the wireless Local Area Networks.

- Micro Waves: Microwaves are radio waves with wavelengths ranging from as long as one meter to as short as one millimeter, or equivalently, with frequencies between 300 MHz (0.3 GHz) and 300 GHz. These are used for communication, radar systems, radio astronomy, navigation and spectroscopy.
- Infrared Waves: Infrared light is used in industrial, scientific, and medical applications. Night-vision devices using infrared illumination allow people or animals to be observed without the observer being detected.
- Communication Satellites: Communication satellites use the atmosphere (microwave radio waves) as the medium through which to transmit signals. A satellite is some solar-powered electronic device that receives, amplifies, and retransmits signals; the satellite acts as a relay station between satellite transmissions stations on the ground (earth stations). They are used extensively for high-volume as well as long-distance communication of both data and voice.

13. Threat: A Threat is anything that can disrupt the operation, functioning, integrity, or availability of a network or system. Network security threats can be categorized into four broad themes:

- Unstructured Threats - These originate mostly from inexperienced individuals using easily available hacking tools from the Internet. Many tools available to anyone on the Internet can be used to discover weaknesses in a company's network. These include port-scanning tools, address-sweeping tools, and many others. Most of these kinds of probes are done more out of curiosity than with a malicious intent in mind.

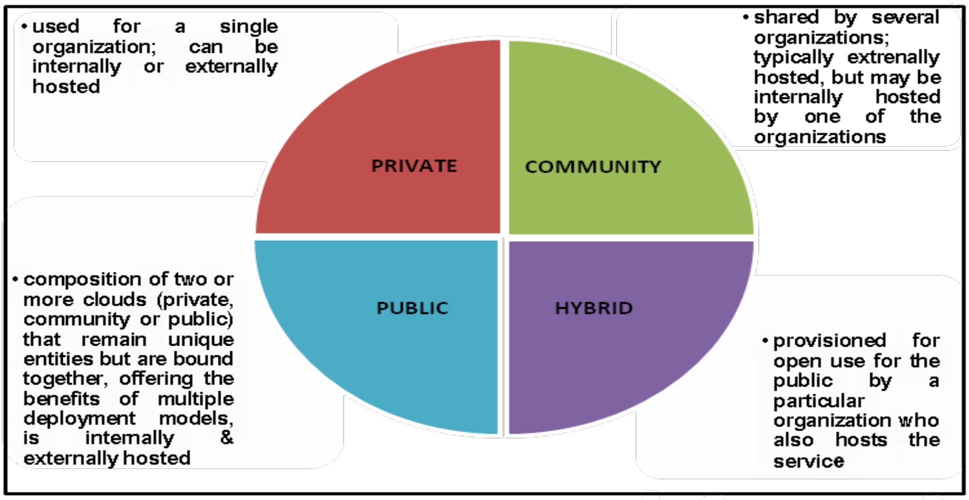
  For example, if a company's external web site is hacked; the company's integrity is damaged. Even if the external web site is separate from the internal information that sits behind a protective firewall, the public does not know that. All they know is that if the company's web site is hacked, then it is an unsafe place to conduct business.
- Structured Threats - These originate from individuals who are highly motivated and technically competent and usually understand network systems design and the vulnerabilities of those systems. They can understand as well as create hacking scripts to penetrate those network systems. An individual who presents a structured threat typically targets a specific destination or group. Usually, these hackers are hired by industry competitors, or state-sponsored intelligence organizations.
- External Threats - These originate from individuals or organizations working outside an organization, which does not have authorized access to organization's computer systems or network. They usually work their way into a network from the Internet or dialup access servers.

- ♦ Internal Threats - Typically, these threats originate from individuals who have authorized access to the network. These users either have an account on a server or physical access to the network. An internal threat may come from a discontented former or current employee or contractor. Majority of security incidents originate from internal threats.

14. Cloud Computing: Cloud computing is the use of various services, such as software development platforms, servers, storage, and software, over the Internet, often referred to as the "Cloud."

Cloud Computing Environment

The Cloud Computing environment can consist of multiple types of clouds based on their deployment and usage as shown in the Figure and explained as follows:



- Public Cloud: The public cloud is made available to the general public or a large industry group. They are administrated by third parties or vendors over the Internet, and services are offered on pay-per-use basis. The key benefits are as follows:

  (a) It is widely used in the development, deployment and management of enterprise applications, at affordable costs;

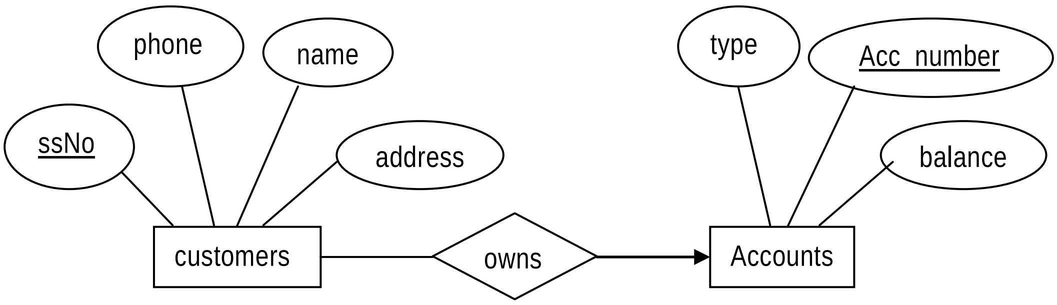
  (b) It allows organizations to deliver highly scalable and reliable applications rapidly and at more affordable costs.

- Private Cloud: Also referred as Internal Cloud, this cloud computing environment resides within the boundaries of an organization and is used exclusively for the organization's benefits. They are built primarily by IT departments within enterprises who seek to optimize utilization of infrastructure resources within the enterprise by provisioning the infrastructure with applications using the concepts of grid and virtualization. The benefit of a Private Cloud is that it enables an enterprise to manage the infrastructure and have more control, but this comes at the cost of IT department creating a secure and scalable cloud.

- **Community Cloud:** This is the sharing of computing infrastructure in between organizations of the same community. For example, all Government organizations within India may share computing infrastructure on the cloud to manage data. The risk is that data may be stored with the data of competitors.
- **Hybrid Cloud:** It is maintained by both internal and external providers. It is a composition of two or more clouds (Private, Community or Public). They have to maintain their unique identity, but are bound together by standardized data and application portability. With a hybrid cloud, organizations might run non-core applications in a public cloud, while maintaining core applications and sensitive data in-house in a private cloud.

15. (a) The E-R Diagram is as follows:

The underlined attributes represent the Primary Key which are unique and are used for identification of a record.



(b) To check for the completeness of the decision table, do the following:

- Count the number of dashes in the condition entries for each rule. The number of rules represented by each rule is 2^m, where m is the number of dashes. Where there are no dashes, the number represented is $2^0 = 1$. A single dash means $2^1 = 2$ and so on.
- Sum the number of dashes represented by the different rules as computed above.
- Compare the number of rules (no of dashes) represented by the reduced table with 2^n (where n is the number of conditions). If they are equal (and all other features are correct), the table is complete.

Now, Sum of the number of dashes in rows R1, R2, R3, R4 and R5 are

= $2^2 + 2^1 + 2^2 + 2^0 + 2^0$

= 4 + 2 + 4 + 1 + 1

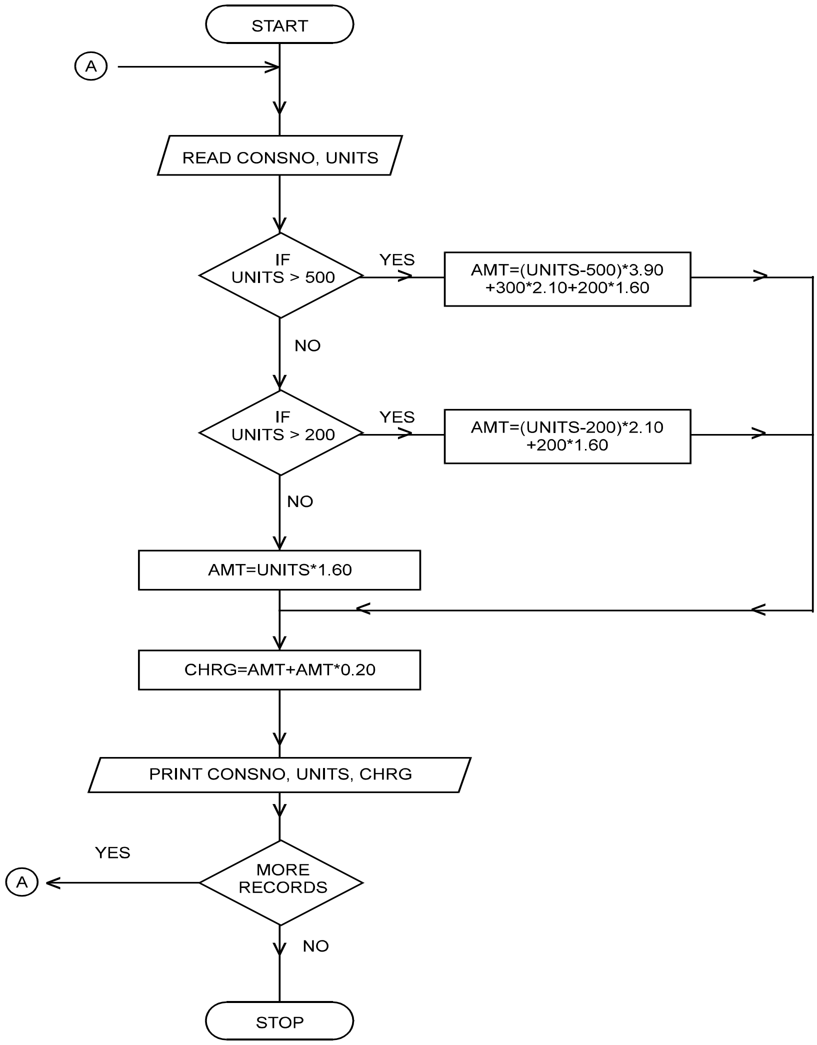
= 12 ----------------------------------(i)

Also, $2^{\text{number of conditions}} = 2^n = 2^4$ (where conditions are C1, C2, C3, C4)

= 16 ----------------------------------(ii)

Since (i) and (i) are not equal, thus the table is not complete.

(c) The required flow chart is given below:



CONSNO - Consumer Number UNITS - Number of Units consumed

CHRG - Total charges AMT - Total amount

SECTION – B: STRATEGIC MANAGEMENT

QUESTIONS

Correct/Incorrect with reasoning

1. State with reasons which of the following statements are correct/incorrect:
   - (a) Diversity in environment makes it difficult to understand.
   - (b) An organization with intense competition is unlucky.
   - (c) The technology and business are highly interrelated and interdependent.
   - (d) A sound strategy does not leave any scope for miscalculations.
   - (e) The strategic management process ends with implementation.
   - (f) Strategy formulation heavily relies on intuition and hunch.
   - (g) One or two key success factors may outrank others.
   - (h) Strategic planning always flows from top to bottom.
   - (i) Stability strategies are do-nothing approach to manage.
   - (j) Cost-plus pricing ensures profits in competition.
   - (k) Network structure creates virtual organisations.
   - (l) Unfreezing facilitates change.

Differences between the two concepts

2. Distinguish between the following:
   - (a) Micro environment and Macro environment.
   - (b) Forward integration and backward integration
   - (c) Inbound logistics and outbound logistics
   - (d) Concentric diversification and conglomerate diversification.

Short notes

3. Write short notes on the following:
   - (a) Globalisation
   - (b) strategic vision
   - (c) Transformational leadership
   - (d) Kieretsus
   - (e) Hourglass Structure

Brief answers

4. Briefly answer the following questions:
   (a) What is a mission statement?
   (b) How production strategy implements, supports and drives higher strategies?
   (c) What do you understand by the term star in the context of BCG matrix?
   (d) What are the major dimensions of strategic decisions?
   (e) Benchmarking process helps to achieve improvement in diverse range of management functions. Discuss.

Descriptive Answers

Chapter 1-Business Environment

5. What is Environment? Briefly explain various macro environmental factors in Indian context.
6. What do you understand by the term business? Are business done for profit alone. Explain various objectives of business.

Chapter 2-Business Policy and Strategic Management

7. What do you understand by the term corporate strategy? Explain the concept with its characteristics. How would you argue that 'corporate strategy 'ensures the correct alignment of the firm with its environment'?
8. What do you understand by ‘Strategy’? Explain the four generic strategies as discussed by Glueck and Jauch.

Chapter 3-Strategic Analysis

9. What is TOWS Matrix. How is it improvement over the SWOT Analysis? Describe the construction of TOWS Matrix.
10. Explain GE model. How is it useful in making strategic choices?

Chapter 4-Strategic Planning

11. Discuss how mergers and acquisitions are used for business growth. What are the various types of mergers?
12. What is diversification? Distinguish between vertically integrated diversification and horizontally integrated diversification.

Chapter 5-Formulation of Functional Strategy

13. What are functional strategies? How important are they for the business?
14. Explain the requirements for the successful implementation of supply chain management system?

Chapter 6-Strategic Implementation and Control

15. What is strategic change? How do you initiate strategic change in an organisation? Explain the change process proposed by Kurt Lewin.

16. What are the leadership roles played by a strategic leader? Distinguish between a transformational leader and a traditional leader.

Chapter 7-Reaching Strategic Edge

17 How internet is affecting the business? Explain the strategy-shaping characteristics of the E-commerce environment.

18. How six sigma can be implemented for *existing and new products.*

SUGGESTED ANSWERS / HINTS

1. (a) Correct: The environment encapsulates many different influences; the difficulty is in making sense of this diversity in a way which can contribute to strategic decision-making. Listing all conceivable environmental influences may be possible, but it may not be of much use because no overall picture emerges of really important influences on the organization.

   (b) Incorrect: Although competition makes organizational working difficult, intense competition is neither a coincidence nor bad luck. All organizations have competition. Multinationals and large organizations clash directly on every level of product and service. Mid-sized and small businesses also chase same customers and find that prices and product quality are bounded by the moves of their competitors. The benefits of competition are also enjoyed by the society and the markets in which organisations operate.

   (c) Correct: The fruits of technological research and development are available to society through business only and this also improves the quality of life of the society. Hence, technology is patronized by business. Technology also drives business and makes a total change on how it is carried out.

   (d) Incorrect: In a sound strategy, allowances are made for possible miscalculations and unanticipated events. Strategy is no substitute for sound, alert and responsible management. Strategy can never be perfect, flawless and optimal. It is in the very nature of strategy that it is flexible and pragmatic; it is art of the possible; it does not preclude second-best choices, trade-offs, sudden emergencies, pervasive pressures, failures and frustrations.

   (e) Incorrect: Strategy formulation, implementation, and evaluation activities are performed on a continual basis, not just at the end of the year or semi-annually. The strategic management process is dynamic and continuous. It never really ends. Any significant extraneous factor can trigger a change in the process.

(f) Incorrect: Strategy formulation is not a task that managers can get by with intuition, opinions, good instincts, and creative thinking. Judgments about what strategies to pursue flow directly from analysis of an organisational external environment and internal situation. It is a pragmatic approach in which strategies are carefully chosen from various alternatives after thorough analysis of micro and macro environment, competition, capabilities, resources, internal strengths, weaknesses and market position.

(g) Correct: Key success factors vary from industry to industry and even from time to time within the same industry as driving forces and competitive conditions change. Only rarely does an industry have more than three or four key success factors at any one time. And even among these three or four, one or two usually outrank the others in importance. Managers, therefore, have to resist the temptation to include factors that have only minor importance.

(h) Incorrect: Although strategic planning is a top level management function, the flow of planning can be from corporate to divisional level or vice-versa. There are two approaches for strategic planning - top down or bottom up. Top down strategic planning describes a centralized approach to strategy formulation in which the corporate centre determines mission, strategic intent, objectives and strategies for the organization as a whole and for all parts. Unit managers are seen as implementers of pre-specified corporate strategies. Bottom up strategic planning is the characteristic of autonomous or semi-autonomous divisions or subsidiary companies in which the corporate centre does not conceptualize its strategic role as being directly responsible. It may prefer to act as a catalyst and facilitator.

(i) Incorrect: Stability strategies are implemented by approaches wherein few functional changes are made in the products or markets. However, it is not a 'do nothing' strategy. It involves keeping track of new developments to ensure that the strategy continues to make sense. This strategy is typical for mature business organizations. Some small organizations will also frequently use stability as a strategic focus to maintain comfortable market or profit position.

(j) Incorrect: Theoretically, organizations may adopt cost plus pricing wherein a margin is added to the cost of the product to determine its price. However, in the competitive environment such an approach may not be feasible. More and more companies of today have to accept the market price with minor deviations and work towards their costs. They reduce their cost in order to maintain their profitability.

(k) Correct: In a network structure many activities are outsourced. A corporation organized in this manner is often called a virtual organization because it is composed of a series of project groups or collaborations linked by constantly changing non-hierarchical, cobweb-like networks. The network structure becomes most useful when the environment of a firm is unstable and is expected to remain so. Under such conditions, there is usually a strong need for innovation and quick response. Instead of having salaried employees, it may contract with people for a specific project or length of time.

(l) **Correct:** Unfreezing makes the individuals or organizations aware of the necessity for change and prepares them for such a change. According to Kurt Lewin changes should not come as a surprise to the members of the organization. Sudden and unannounced change would be socially destructive and morale lowering. The management must pave the way for the change by first "unfreezing the situation", so that members would be willing and ready to accept the change. Unfreezing is the process of breaking down the old attitudes and behaviours, customs and traditions so that they start with a clean slate.

2. (a) The business environment consists of both the macro environment and the micro environment. Following are the differences between the two:

1. The micro environment refers to the forces that are very close to the company and affect its ability to do routine functions. Macro environment refers to all forces that are part of the larger periphery and distantly affect organization and micro environment.

2. Micro environment includes the company itself, its suppliers, marketing intermediaries, customer markets and competitors. Whereas macro environment includes demography, economy, natural forces, technology, politics, legal and socio-cultural.

3. The elements of micro environment are specific to the said business and affects it's working on short term basis. The elements of macro environment are general environment and affect the working of all the firms in an industry.

(b) Forward and backward integration forms part of vertically integrated diversification. In vertically integrated diversification, firms opt to engage in businesses that are vertically related to the existing business of the firm. While diversifying firms opt to engage in businesses that are linked forward or backward in the chain and enters specific product/process steps with the intention of making them into new businesses for the firm.

Backward integration is a step towards, creation of effective supply by entering business of input providers. Strategy employed to expand profits and gain greater control over production of a product whereby a company will purchase or build a business that will increase its own supply capability or lessen its cost of production. On the other hand forward integration is moving forward in the value chain and entering business lines that use existing products. Forward integration will also take place where organisations enter into businesses of distribution channels.

(c) Inbound logistics are the activities concerned with receiving, storing and distributing the inputs to the product/service. It includes all activities such as materials handling, stock control, transport etc.

Outbound logistics relate to collection, storage and distribution of the product to customers. It includes all activities such as storage/warehousing of finished goods, order processing, scheduling deliveries, operation of delivery vehicles, etc.

(d) Concentric diversification occurs when a firm adds related products or markets. On the other hand conglomerate diversification occurs when a firm diversifies into areas that are unrelated to its current line of business.

In concentric diversification, the new business is linked to the existing businesses through process, technology or marketing. In conglomerate diversification, no such linkages exist; the new business/product is disjointed from the existing businesses/products.

The most common reasons for pursuing a concentric diversification are that opportunities in a firm's existing line of business are available. However, common reasons for pursuing a conglomerate growth strategy is that opportunities in a firm's current line of business are limited or opportunities outside are highly lucrative.

3. (a) In simple economic terms, globalization refers to the process of integration of the world into one huge market. At the company level, globalization means two things: (a) the company commits itself heavily with several manufacturing locations around the world and offers products in several diversified industries, and (b) it also means ability to compete in domestic markets with foreign competitors.

(b) A strategic vision delineates organisation's aspirations for the business, providing a panoramic view of the position where the organisation is going. A strategic vision points an organization in a particular direction, charts a strategic path for it to follow in preparing for the future, and moulds organizational identity. A Strategic vision is a roadmap of a company's future – providing specifics about technology and customer focus, the geographic and product markets to be pursued, the capabilities it plans to develop, and the kind of company that management is trying to create.

(c) Transformational leadership style use charisma and enthusiasm to inspire people to exert them for the good of the organization. Transformational leadership style may be appropriate in turbulent environments, in industries at the very start or end of their life-cycles, in poorly performing organizations when there is a need to inspire a company to embrace major changes. Transformational leaders offer excitement, vision, intellectual stimulation and personal satisfaction. They inspire involvement in a mission, giving followers a 'dream' or 'vision' of a higher calling so as to elicit more dramatic changes in organizational performance. Such a leadership motivates followers to do more than originally affected to do by stretching their abilities and increasing their self-confidence, and also promote innovation throughout the organization.

(d) Kieretsus is a loosely-coupled group of companies, usually in related industries. It is a Japanese term which is used for large cooperative networks of businesses. Kieretsus members are peers and may own significant amounts of each other's stock and have many board members in common.

(e) In the recent years information technology and communications have significantly altered the functioning of organizations. The role played by middle management is diminishing as the tasks performed by them are increasingly being replaced by the technological tools. Hourglass organization structure consists of three layers with constricted middle layer. The structure has a short and narrow middle-management level. Information technology links the top and bottom levels in the organization taking away many tasks that are performed by the middle level managers. A shrunken middle layer coordinates diverse lower level activities. Contrary to traditional middle level managers who are often specialist, the managers in the hourglass structure are generalists and perform wide variety of tasks. They would be handling cross-functional issues emanating such as those from marketing, finance or production.

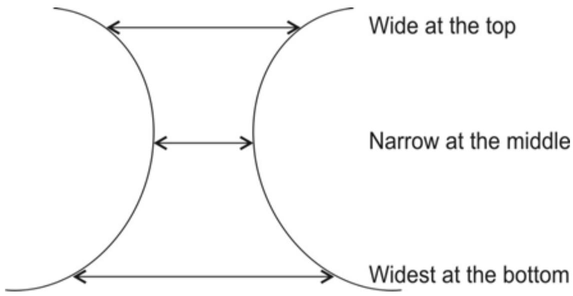


Figure: Hourglass Organisation Structure

Hourglass structure has obvious benefit of reduced costs. It also helps in enhancing responsiveness by simplifying decision making. Decision making authority is shifted close to the source of information so that it is faster. However, with the reduced size of middle management the promotion opportunities for the lower levels diminish significantly. Continuity at same level may bring monotony and lack of interest and it becomes difficult to keep the motivation levels high. Organisations try to overcome these problems by assigning challenging tasks, transferring laterally and having a system of proper rewards for performance.

4. (a) Mission statement is an answer to the question “Who we are and what we do” and hence has to focus on the organisation’s present capabilities, focus activities and business makeup. An organisation’s mission states what customers it serves, what need it satisfies, and what type of product it offers. It is an expression of the growth ambition of the organisation.

(b) For effective implementation of higher level strategies, strategists need to provide direction to functional managers, including production, regarding the plans and policies to be adopted. Production strategy provides a path for transmitting corporate and business level strategy to the production systems and makes it operational. It may relate to production planning, operational system, control and research & development.

(c) Star in BCG Matrix: BCG growth-share matrix is a simple way to portray an organisation's portfolio of investments. Growth share matrix also known for its cow and dog metaphors is popularly used for resource allocation in a diversified company. The matrix is based on combinations of relative market share of the products or SBUs and their market growth rate.

Stars, a position in the matrix, are characterised by high market share and high growth rate. They are products or SBUs that are growing rapidly. They also need heavy investment to maintain their position and finance their rapid growth potential. Business organisations that enjoy star positions have best opportunities for expansion and growth.

(d) The major dimensions of strategic decisions are given below:

1. *Strategic issues require top-management decisions*: Strategic issues involve thinking in totality of the organizations and also there is lot of risk involved and hence required to be considered by the top management.

2. *Strategic issues involve the allocation of large amounts of company resources*: They may require huge financial investment to venture into a new area of business or the organization may require huge number of manpower with new set of skills in them.

3. *Strategic issues are likely to have a significant impact on the long term prosperity of the firm*: Generally the results of strategic implementation are seen on a long term basis and not immediately.

4. *Strategic issues are future oriented*: Strategic thinking involves predicting the future environmental conditions and how to orient for the changed conditions.

5. *Strategic issues usually have major multifunctional or multi-business consequences*: As they involve organization in totality they affect different sections of the organization with varying degree.

6. *Strategic issues necessitate consideration of factors in the firm's external environment*: Strategic focus in organization involves orienting its internal environment to the changes of external environment.

(e) Benchmarking is a process of finding the best practices within and outside the industry to which an organisation belongs. Knowledge of the best practices helps in setting standards and finding ways to match or even surpass own performances with the best performances.

Benchmarking is a process of continuous improvement in search for competitive advantage. Firms can use benchmarking process to achieve improvement in diverse range of management function such as mentioned below:

1. maintenance operations,
2. assessment of total manufacturing costs,
3. product development,
4. product distribution,
5. customer services,
6. plant utilisation levels; and
7. human resource management.

5. Environment is sum of several external and internal forces that affect the functioning of business. Businesses function as a part of broader environment. The inputs in the form of human, physical, financial and other related resources are drawn from the environment. The business converts these resources through various processes into outputs of products and/or services. The latter are exchanged with the external client groups, say customers. The extent to which the business thrives depends on the manner in which it interacts with its environment. Macro environment is explained as one which is largely external to the enterprise and thus beyond the direct influence and control of the organization, but which exerts powerful influence over its functioning. Important elements of macro environment are:

   1. Demographic environment.
   2. Economic environment.
   3. Political-Legal Environment.
   4. Socio-Cultural environment.
   5. Technological environment.
   6. Global environment.

   Students may briefly explain the above giving Indian examples. In demographic they may highlight that India constitutes about 16% of world population. Indian population is fairly young. There is great diversity. Labour is cheap and so on. The economic problems being faced presently and about 5% growth may be covered in economic environment. In political-legal students may touch upon new Companies Act, new Government, etc. The diversity in socio-cultural including dialects, differing traditions etc. can be mentioned in socio-cultural environment. India's promptness in accepting new technology, flow of business across the border including flow of knowledge and business processes may be covered in technological environment. The global environment may include encouragement to foreign investors and exports. It may also cover our dependence on crude and how its prices are affecting India. A lot of changes are occurring within India and across the globe affecting the business. Students should list out different elements of macro environment and discuss the contemporary developments in each of the area. They may develop their own answers to cover different elements of environment.

6. The term business is wide and amenable to different usages. A business for our purposes can be any activity consisting of purchase, sale, manufacture, processing, and/or marketing of products and/or services. It is said that a business exists for profits. Profit, as a surplus of business, accrues to the owners. It is their share, just as wages are the share of workers. People invest in business for getting return. For business enterprises, profit is often regarded as the overall measure of performance. Business efficiency is often expressed in terms of percentage of profit to sales volume, to capital employed, to market value of corporate shares and so on. Outside investors also equate profit with the degree of business efficiency and managerial competence and commit their funds in light of such equation and other related assessments.

   Peter F Drucker has drawn two important conclusions about what is a business that are useful for an understanding of the term business. The first thing about a business is that it is created and managed by people. There will be a group of people who will take decisions that will determine whether an organization is going to prosper or decline, whether it will survive or will eventually perish. This is true of every business. The second conclusion drawn is that the business cannot be explained in terms of profit.

   The economic criterion of maximising profits for a firm has little relevance in the present times. Profit maximization, in simple terms is selling at a higher price than the cost. Profit maximization has been qualified with the long-term perspective and has been modified to include development of wealth, to include several non-financial factors such as goodwill, societal factors, relations and so on.

   A business has some purpose. A valid purpose of business is to create customers. It is for the businesses to create a customer or market. It is the customer who determines what a business is. The customer is the foundation of business and keeps it in existence. Organisations seek to balance the objectives in an appropriate manner. Some of the objectives of business are:

   1. Survival
   2. Stability
   3. Growth
   4. Efficiency
   5. Profitability

7. The term strategy is associated with unified design and action for achieving major goals, gaining command over the situation with a long-range perspective and securing a

critically advantageous position. Strategies are formulated at the corporate, divisional and functional level. Corporate strategies are formulated by the top managers. They include the determination of the business lines, expansion and growth, vertical and horizontal integration, diversification, takeovers and mergers, new investment and divestment areas, R & D projects, and so on. These corporate wide strategies need to be operationalized by divisional and functional strategies regarding product lines, production volumes, quality ranges, prices, product promotion, market penetration, purchasing sources, personnel development and like.

In general, a corporate strategy has the following characteristics:

- It is generally long-range in nature, though it is valid for short-range situations also and has short-range implications.
- It is action oriented and is more specific than objectives.
- It is multi-pronged and integrated.
- It is flexible and dynamic.
- It is formulated at the top management level, though middle and lower level managers are associated in their formulation and in designing sub-strategies.
- It is generally meant to cope with a competitive and complex setting.
- It flows out of the goals and objectives of the enterprise and is meant to translate them into realities.
- It is concerned with perceiving opportunities and threats and seizing initiatives to cope with them. It is also concerned with deployment of limited organizational resources in the best possible manner.
- It gives importance to combination, sequence, timing, direction and depth of various moves and action initiatives taken by managers to handle environmental uncertainties and complexities.
- It provides unified criteria for managers in function of decision making.

Corporate strategy in the first place ensures the growth of the firm and its correct alignment with the environment. Corporate strategies are concerned with the broad and long-term questions of what businesses the organization is in or wants to be in, and what it wants to do with those businesses. They set the overall direction the organization will follow. It serves as the design for filling the strategic planning gap. It also helps to build the relevant competitive advantages. A right fit between the firm and its external environment is the primary contribution of corporate strategy. Basically the purpose of corporate strategy is to harness the opportunities available in the environment and countering the threats embedded therein. With the help of corporate strategy, organizations match their unique capabilities with the external environment so as to achieve its vision and mission.

8. Strategies provide an integral framework for management and negotiate their way through a complex and turbulent external environment. Strategy seeks to relate the goals of the organisation to the means of achieving them.

   Strategy may be defined as a long range blueprint of an organisation's desired image, direction and destination what it wants to be, what it wants to do and where it wants to go. Strategy is meant to fill in the need of organisations for a sense of dynamic direction, focus and cohesiveness.

   The Generic Strategies

   According to Glueck and Jauch there are four generic ways in which strategic alternatives can be considered. These are stability, expansion, retrenchment and combinations.

   (i) Stability strategies: One of the important goals of a business enterprise is stability to safeguard its existing interests and strengths, to pursue well established and tested objectives, to continue in the chosen business path, to maintain operational efficiency on a sustained basis, to consolidate the commanding position already reached, and to optimise returns on the resources committed in the business.

   (ii) Expansion Strategy: Expansion strategy is implemented by redefining the business by adding the scope of business substantially increasing the efforts of the current business. Expansion is a promising and popular strategy that tends to be equated with dynamism, vigor, promise and success. Expansion includes diversifying, acquiring and merging businesses.

   (iii) Retrenchment Strategy: A business organisation can redefine its business by divesting a major product line or market. Retrenchment or retreat becomes necessary for coping with particularly hostile and adverse situations in the environment and when any other strategy is likely to be suicidal. In business parlance also, retreat is not always a bad proposition to save the enterprise's vital interests, or even to regroup and recoup the resources before a fresh assault and ascent on the growth ladder is launched.

   (iv) Combination Strategies: Stability, expansion or retrenchment strategies are not mutually exclusive. It is possible to adopt a mix to suit particular situations. An enterprise may seek stability in some areas of activity, expansion in some and retrenchment in the others. Retrenchment of ailing products followed by stability and capped by expansion in some situations may be thought of. For some organisations, a strategy by diversification and/or acquisition may call for a retrenchment in some obsolete product lines, production facilities and plant locations.

9. Heinz Weihrich has developed a matrix called TOWS matrix by comparing strengths and weaknesses of organization with that of market opportunities and threats, a variant of SWOT. It has been criticized that after conducting the SWOT Analysis managers frequently fail to come to terms with the strategic choices that the outcomes demand. In

order to overcome this, Through SWOT analysis organisations identify their strengths, weaknesses, opportunities and threats. While conducting the SWOT Analysis managers are often not able to come to terms with the strategic choices that the outcomes demand. The incremental benefit of the TOWS matrix lies in systematically identifying relationships between these factors and selecting strategies on their basis. The matrix is outlined below:

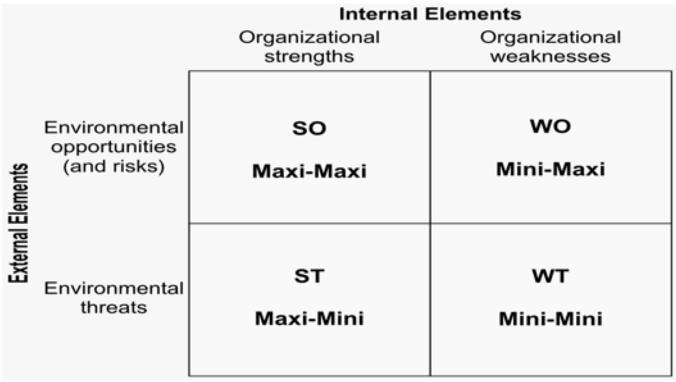


Figure : The TOWS Matrix (Source: Weihrich, H)

The TOWS Matrix is a relatively simple tool for generating strategic options. Through TOWS matrix four distinct alternative kinds of strategic choices can be identified.

SO (Maxi-Maxi): SO is a position that any firm would like to achieve. The strengths can be used to capitalize or build upon existing or emerging opportunities.

ST (Maxi-Mini): ST is a position in which a firm strives to minimize existing or emerging threats through its strengths.

WO (Mini-Maxi): The strategies developed need to overcome organizational weaknesses if existing or emerging opportunities are to be exploited to maximum.

WT (Mini-Mini): WT is a position that any firm will not like to be. An organization facing external threats and internal weaknesses may have to struggle for its survival.

10. The model has been used by General Electric Company (developed by GE with the assistance of the consulting firm McKinsey & Company) known as “Stop-Light” Strategy Model. This model is also known as Business Planning Matrix, GE Nine-Cell Matrix and GE Model. The strategic planning approach in this model has been inspired from traffic control lights. The lights that are used at crossings to manage traffic are: green for go, amber or yellow for caution, and red for stop. This model uses two factors while taking strategic decisions: Business Strength and Market Attractiveness. The vertical axis indicates market attractiveness and the horizontal axis shows the business strength in the industry. The market attractiveness is measured by a number of factors like:

    1. Size of the market.

2. Market growth rate.
3. Industry profitability.
4. Competitive intensity.
5. Availability of Technology.
6. Pricing trends.
7. Overall risk of returns in the industry.
8. Opportunity for differentiation of products and services.
9. Demand variability.
10. Segmentation.
11. Distribution structure (e.g. retail, direct, wholesale) etc.

Business strength is measured by considering the typical drivers like:

1. Market share.
2. Market share growth rate.
3. Profit margin.
4. Distribution efficiency.
5. Brand image.
6. Ability to compete on price and quality.
7. Customer loyalty.
8. Production capacity.
9. Technological capability.
10. Relative cost position.
11. Management caliber, etc.

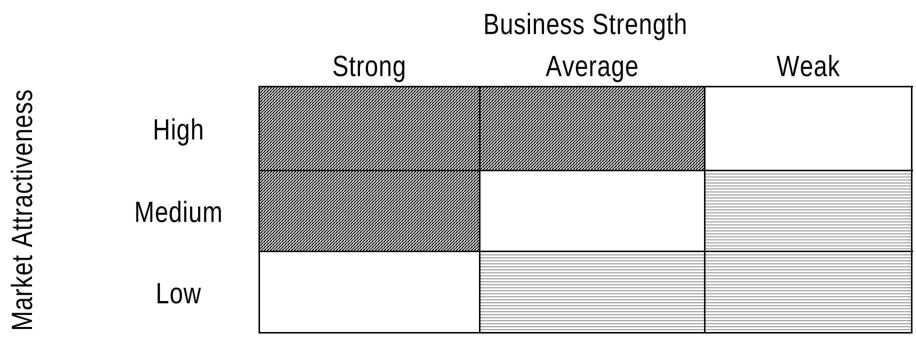
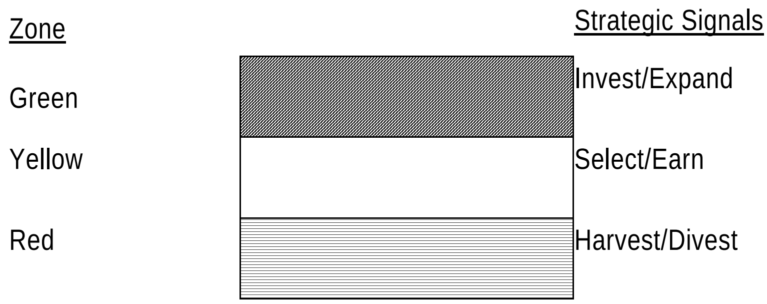


Figure : The GE Portfolio Matrix



If a product falls in the green section, the business is at advantageous position. To reap the benefits, the strategic decision can be to expand, to invest and grow. If a product is in the amber or yellow zone, it needs caution and managerial discretion is called for making the strategic choices. If a product is in the red zone, it will eventually lead to losses that would make things difficult for organisations. In such cases, the appropriate strategy should be retrenchment, divestment or liquidation.

11. Many organizations in order to achieve quick growth, expand or diversify use strategies such as mergers and acquisitions. This also helps in deploying surplus funds.

Merger and acquisition in simple words are defined as a process of combining two or more organizations together. There is a thin line of difference between the two terms but the impact of combination is completely different in both the cases.

Some organizations prefer to grow through mergers. Merger is considered to be a process when two or more organizations join together to expand their business operations. In such a case the deal gets finalized on friendly terms. Owners of pre-merged entities have right over the profits of new entity. In a merger two organizations combine to increase their strength and financial gains.

When one organization takes over the other organization and controls all its business operations, it is known as acquisition. In the process of acquisition, one financially strong organization overpowers the weaker one. Acquisitions often happen during recession in economy or during declining profit margins. In this process, one that is financially stronger and bigger establishes it power. The combined operations then run under the name of the powerful entity. A deal in case of an acquisition is often done in an unfriendly manner, it is more or less a forced association where the powerful organization takes over a weaker entity.

Types of Mergers

1. Horizontal merger: Horizontal mergers are combinations of firms engaged in the same industry. It is a merger with a direct competitor. The principal objective behind this type of mergers is to achieve economies of scale in the production process by shedding duplication of installations and functions, widening the line of products, decrease in working capital and fixed assets investment, getting rid of competition

and so on. For example, formation of Brook Bond Lipton India Ltd. through the merger of Lipton India and Brook Bond.

2. Vertical merger: It is a merger of two organizations that are operating in the same industry but at different stages of production or distribution system. This often leads to increased synergies with the merging firms. If an organization takes over its supplier/producers of raw material, then it leads to backward integration. On the other hand, forward integration happens when an organization decides to take over its buyer organizations or distribution channels. Vertical merger results in operating and financial economies. Vertical mergers help to create an advantageous position by restricting the supply of inputs or by providing them at a higher cost to other players.

3. Co-generic merger: In co-generic merger two or more merging organizations are associated in some way or the other related to the production processes, business markets, or basic required technologies. Such merger include the extension of the product line or acquiring components that are required in the daily operations. It offers great opportunities to businesses to diversify around a common set of resources and strategic requirements. For example, an organization manufacturing refrigerators can diversify by merging with another organization having business in kitchen appliances.

4. Conglomerate merger: Conglomerate mergers are the combination of organizations that are unrelated to each other. There are no linkages with respect to customer groups, customer functions and technologies being used. There are no important common factors between the organizations in production, marketing, research and development and technology. In practice, however, there is some degree of overlap in one or more of these factors.

12. Diversification refers to a growth strategy where a business markets new products in new markets. It is a strategy by starting up or acquiring businesses outside the company's current products and markets. This strategy is risky because it does not rely on either the company's successful product or its position in established markets. Typically the business is moving into markets in which it has little or no experience. As market conditions change overtime, a company may shift product-market growth strategies.

    For example, when its present market is fully saturated a company may have no choice other than to pursue new market.

    In vertically integrated diversification, firms opt to engage in businesses that are related to the existing business of the firm. The firm remains vertically within the same process. Sequence moves forward or backward in the chain and enters specific product/process steps with the intention of making them into new businesses for the firm.

On the other hand, horizontal Integrated diversification is the acquisition of one or more similar business operating at the same stage of the production-marketing chain that is going into complementary products, by-products or taking over competitors' businesses.

13. Once higher level corporate and business strategies are developed, management need to formulate and implement strategies for each functional area. For effective implementation, strategists have to provide direction to functional managers regarding the plans and policies to be adopted. In fact, the effectiveness of strategic management depends critically on the manner in which strategies are implemented. Strategy of one functional area can not be looked at in isolation, because it is the extent to which all the functional tasks are interwoven that determines the effectiveness of the major strategy.

Functional area strategy such as marketing, financial, production and Human Resource are based on the functional capabilities of an organisation. For each functional area, first the major sub areas are identified and then for each of these sub functional areas, contents of functional strategies, important factors, and their importance in the process of strategy implementation is identified.

In terms of the levels of strategy formulation, functional strategies operate below the SBU or business-level strategies. Within functional strategies there might be several sub-functional areas. Functional strategies are made within the higher level strategies and guidelines therein that are set at higher levels of an organisation. Functional managers need guidance from the business strategy in order to make decisions. Operational plans tell the functional managers what has to be done while policies state how the plans are to be implemented.

Major strategies need to be translated to lower levels to give holistic strategic direction to an organisation. Functional strategies provide details to business strategy & govern as to how key activities of the business will be managed. Functional strategies play two important roles. Firstly, they provide support to the overall business strategy. Secondly, they spell out as to how functional managers will work so as to ensure better performance in their respective functional areas. The reasons why functional strategies are really important and needed for business can be enumerated as follows:

The development of functional strategies is aimed at making the strategies-formulated at the top management level-practically feasible at the functional level.

1. Functional strategies facilitate flow of strategic decisions to the different parts of an organisation.

2. They act as basis for controlling activities in the different functional areas of business.

3. The time spent by functional managers in decision-making is reduced as plans lay down clearly what is to be done and policies provide the discretionary framework within which decisions need to be taken.

4. Functional strategies help in bringing harmony and coordination as they remain part of major strategies.

5. Similar situations occurring in different functional areas are handled in a consistent manner by the functional managers.

14. Successful implementation of supply management systems require a change from managing individual functions to integrating activities into key supply chain processes. It involves collaborative work between buyers and suppliers, joint product development, common systems and shared information. A key requirement for successfully implementing supply chain will be network of information sharing and management. The partners need to link together to share information through electronic data interchange and take decisions in timely manner.

    Implementing and successfully running supply chain management system will involve:

    1. *Product development:* Customers and suppliers must work together in the product development process. Right from the start the partners will have knowledge of all. Involving all partners will help in shortening the life cycles. Products are developed and launched in shorter time and help organizations to remain competitive.

    2. *Procurement:* Procurement requires careful resource planning, quality issues, identifying sources, negotiation, order placement, inbound transportation and storage. Organizations have to coordinate with suppliers in scheduling without interruptions. Suppliers are involved in planning the manufacturing process.

    3. *Manufacturing:* Flexible manufacturing processes must be in place to respond to market changes. They should be adaptive to accommodate customization and changes in the taste and preferences. Manufacturing should be done on the basis of just-in-time (JIT) and minimum lot sizes. Changes in the manufacturing process be made to reduce manufacturing cycle.

    4. *Physical distribution:* Delivery of final products to customers is the last position in a marketing channel. Availability of the products at the right place at right time is important for each channel participant. Through physical distribution processes serving the customer become an integral part of marketing. Thus supply chain management links a marketing channel with customers.

    5. *Outsourcing:* Outsourcing is not limited to the procurement of materials and components, but also include outsourcing of services that traditionally have been provided within an organization. The company will be able to focus on those activities where it has competency and everything else will be outsourced.

    6. *Customer services:* Organizations through interfaces with the company's production and distribution operations develop customer relationships so as to satisfy them. They work with customer to determine mutually satisfying goals, establish and maintain relationships. This in turn help in producing positive feelings in the organization and the customers.

7. *Performance measurement:* There is a strong relationship between the supplier, customer and organisation. Supplier capabilities and customer relationships can be correlated with a firm performance. Performance is measured in different parameters such as costs, customer service, productivity and quality.

15. The changes in the environmental forces often require businesses to make modifications in their existing strategies and bring out new strategies. Strategic change is a complex process and it involves a corporate strategy focused on new markets, products, services and new ways of doing business. For initiating strategic change, three steps can be identified as under:

(i) Recognize the need for change: The first step is to diagnose which facets of the present corporate culture are strategy supportive and which are not. This basically means going for environmental scanning involving appraisal of both internal and external capabilities may it be through SWOT analysis and then determine where the lacuna lies and scope for change exists.

(ii) Create a shared vision to manage change: Objectives and vision of both individuals and organization should coincide. There should be no conflict between them. Senior managers need to constantly and consistently communicate the vision not only to inform but also to overcome resistance through proper communication. Strategy implementers have to convince all those concerned. The actions taken have to be credible, highly visible and unmistakably indicative of management's seriousness to new strategic initiatives and associated changes.

(iii) Institutionalise the change: This is basically an action stage which requires implementation of changed strategy. Creating and sustaining a different attitude towards change is essential to ensure that the firm does not slip back into old ways of thinking or doing things. Capacity for self-renewal should be a fundamental anchor of the new culture of the firm. Besides, change process must be regularly monitored and reviewed to analyse the after-effects of change. Any discrepancy or deviation should be brought to the notice of persons concerned so that the necessary corrective actions are taken. It takes time for the changed culture to prevail.

To make the change lasting, Kurt Lewin proposed three phases of the change process for moving the organization from the present to the future. These stages are unfreezing, changing and refreezing.

(a) Unfreezing the situation: The process of unfreezing simply makes the individuals or organizations aware of the necessity for change and prepares them for such a change. Lewin proposes that the changes should not come as a surprise to the members of the organization. Sudden and unannounced change would be socially destructive and morale lowering. The management must pave the way for the change by first "unfreezing the situation", so that members would be willing and ready to accept the change.

Unfreezing is the process of breaking down the old attitudes and behaviours, customs and traditions so that they start with a clean slate. This can be achieved by making announcements, holding meetings and promoting the ideas throughout the organization.

(b) Changing to new situation: Once the unfreezing process has been completed and the members of the organization recognise the need for change and have been fully prepared to accept such change, their behaviour patterns need to be redefined. H.C. Kellman has proposed three methods for reassigning new patterns of behaviour. These are compliance, identification and internalisation.

Compliance: It is achieved by strictly enforcing the reward and punishment strategy for good or bad behaviour. Fear of punishment, actual punishment or actual reward seems to change behaviour for the better.

Identification: Identification occurs when members are psychologically impressed upon to identify themselves with some given role models whose behaviour they would like to adopt and try to become like them.

Internalization: Internalization involves some internal changing of the individual's thought processes in order to adjust to a new environment. They have given freedom to learn and adopt new behaviour in order to succeed in the new set of circumstances.

(c) Refreezing: Refreezing occurs when the new behaviour becomes a normal way of life. The new behaviour must replace the former behaviour completely for successful and permanent change to take place. In order for the new behaviour to become permanent, it must be continuously reinforced so that this new acquired behaviour does not diminish or extinguish.

Change process is not a one time application but a continuous process due to dynamism and ever changing environment. The process of unfreezing, changing and refreezing is a cyclical one and remains continuously in action.

16. A strategy manager has many different leadership roles to play: visionary, chief entrepreneur and strategist, chief administrator, culture builder, resource acquirer and allocator, capabilities builder, process integrator, crisis solver, spokesperson, negotiator, motivator, arbitrator, policy maker, policy enforcer, and head cheerleader. Sometimes it is useful to be authoritarian; sometimes it is best to be a perceptive listener and a compromising decision maker; sometimes a strongly participative, collegial approach works best; and sometimes being a coach and adviser is the proper role. Many occasions call for a highly visible role and extensive time commitments, while others entail a brief ceremonial performance with the details delegated to subordinates.

For the most part, major change efforts have to be top-down and vision-driven. Leading change has to start with diagnosing the situation and then deciding which of several ways to handle it. Managers have five leadership roles to play in pushing for good strategy execution:

1. Staying on top of what is happening, closely monitoring progress, ferreting out issues, and learning what obstacles lie in the path of good execution.
2. Promoting a culture and esprit de corps that mobilizes and energizes organizational members to execute strategy in a competent fashion and perform at a high level.
3. Keeping the organization responsive to changing conditions, alert for new opportunities, bubbling with innovative ideas, and ahead of rivals in developing competitively valuable competencies and capabilities.
4. Exercising ethics leadership and insisting that the company conduct its affairs like a model corporate citizen.
5. Pushing corrective actions to improve strategy execution and overall strategic performance.

Strategic leadership is the ability of influencing others to voluntarily make decisions that enhance prospects for the organisation's long-term success while maintaining short-term financial stability. Two basic approaches to leadership can be transformational leadership style and transactional leadership style. The difference between transformational and traditional leadership style can be given as follows:

1. Traditional leadership borrowed its concept from formal Top-down type of leadership such as in the military. The style is based on the belief that power is bestowed on the leader, in keeping with the traditions of the past. This type of leadership places managers at the top and workers at the bottom of rung of power.

   In transformational leadership, leader motivates and empowers employees to achieve company's objectives by appealing to higher ideas and values. They use charisma and enthusiasm to inspire people to exert them for the good of the organization.

2. Traditional leadership emphasizes characteristics or behaviours of only one leader within a particular group whereas transformational leadership provides a space to have more than one leader in the same group at the same time. According to the transformational leadership style, a leader at one instance can also be a follower in another instance. Thus there is element of flexibility in the relationships.
3. Traditional leadership is more focused in getting the work done in routine environment. Traditional leaders are effective in achieving the set objectives and goals whereas transformational leaders have behavioural capacity to recognize and react to paradoxes, contradictions and complexities in the environment. Transformational leadership style is more focus on the special skills or talents that the leaders must have to practice to face challenging situations. Transformational leaders work to change the organisational culture by implementing new ideas.

4. In traditional leadership, followers are loyal to the position and what it represents rather than who happens to be holding that position whereas in transformational leadership followers dedicate and admire the quality of the leader not of its position.

17. The impact of the Internet and the rapidly emerging e-commerce environment is profound. The advent of the Internet and online networks changes everything. There can be no doubt that the Internet is a driving force of historical and revolutionary proportions. The coming of ecommerce has changed the character of the market, created new driving forces and key success factors and bred the formation of new strategic groups. The creativeness with which a company incorporates e-commerce practices holds enormous potential for reconfiguring its value chain and affecting its company's competitiveness. Also the Internet economy presents opportunities and threats that demand strategic response and that require managers to craft bold new strategies.

    We need to understand how growing use of the Internet by businesses and consumers reshapes the economic landscape and alters traditional industry boundaries. The following characteristics of the strategy-shaping E-Commerce environment are:

    1. The Internet makes it feasible for companies everywhere to compete in global markets.
    2. Competition in an industry is greatly intensified by the new e-commerce strategic initiatives of existing rivals and by the entry of new, enterprising e-commerce rivals.
    3. Entry barriers into the e-commerce world are relatively low.
    4. Online buyers gain bargaining power because they confront far fewer obstacles to comparing the products, prices, and shipping times of rival vendors.
    5. The Internet makes it feasible for companies to reach beyond their borders to find the best suppliers and, further, to collaborate closely with them to achieve efficiency gains and cost savings.
    6. Internet and PC technologies are advancing rapidly, often in uncertain and unexpected directions.
    7. The internet results in much faster diffusion of new technology and new idea across the world.
    8. The e-commerce environment demands that companies move swiftly.
    9. E-commerce technology opens up a host of opportunities for reconfiguring industry and company value chains.
    10. The Internet can be an economical means of delivering customer service.
    11. The capital for funding potentially profitable e-commerce businesses is readily available.
    12. The needed e-commerce resource in short supply is human talent-in the form of both technological expertise and managerial know-how.

18. For implementing six sigma, there are two separate key methodologies. They are known as DMAIC and DMADV.

DMAIC is an acronym for five different steps used in six sigma - Define, Measure, Analyze Improve, and control. DMAIC methodology is directed towards improvement of existing product, process or service.

1. *Define:* To begin with six sigma experts define the process improvement goals that are consistent with the strategy of the organization and customer demands. They discuss different issues with the senior managers so as to define what needs to done.
2. *Measure:* The existing processes are measured to facilitate future comparison. Six sigma experts collect process data by mapping and measuring relevant processes.
3. *Analyze:* Verify cause-and-effect relationship between the factors in the processes. Experts need to identify the relationship between the factors. They have to make a comprehensive analysis to identify hidden or not so obvious factor.
4. *Improve:* On the basis of the analysis experts make a detailed plan to improve.
5. *Control:* Initial trial or pilots are run to establish process capability and transition to production. Afterwards continuously measure the process to ensure that variances are identified and corrected before they result in defects.

DMADV is an acronym for Define, Measure, Analyze, Design, and Verify. DMADV is a strategy for designing new products, processes and services.

1. *Define:* As in case of DMAIC six sigma experts have to formally define goals of the design activity that are consistent with strategy of the organization and the demands of the customer.
2. *Measure:* Next identify the factors that are critical to quality (CTQs). Measure factors such as product capabilities and production process capability. Also assess the risks involved.
3. *Analyze:* Develop and design alternatives. Create high-level design and evaluate to select the best design.
4. *Design:* Develop details of design and optimise it. Verify designs may require using techniques such as simulations.
5. *Verify:* Verify designs through simulations or pilot runs. Verified and implemented processes are handed over to the process owners.

However, in spite of different orientation in two methodologies, conceptually there is overlapping between the DMAIC and DMADV as both are essentially having similar objectives.

Applicability of Pronouncements/Legislative Amendments/Circulars etc. for November, 2014 – Intermediate (IPC) Examination

Paper 5: Advanced Accounting

Accounting Standards

AS 4 : Contingencies and Events occurring after the Balance Sheet Date

AS 5 : Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies

AS 11 : The Effects of Changes in Foreign Exchange Rates (Revised 2003)

AS 12 : Accounting for Government Grants

AS 16 : Borrowing Costs

AS 19 : Leases

AS 20 : Earnings Per Share

AS 26 : Intangible Assets

AS 29 : Provisions, Contingent Liabilities and Contingent Assets.

Non-Applicability of Ind ASs for November, 2014 Examination

The MCA has hosted on its website 35 Indian Accounting Standards (Ind AS) without announcing the applicability date. Students may note that these Ind ASs are not applicable for November, 2014 Examination**.**

Paper 6: Auditing and Assurance

I. Standards on Auditing (SAs)

S.No	SA	Title of Standard on Auditing
1	SA 200	Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with Standards on Auditing
2	SA 210	Agreeing the Terms of Audit Engagements
3	SA 220	Quality Control for Audit of Financial Statements
4	SA 230	Audit Documentation
5	SA 240	The Auditor's responsibilities Relating to Fraud in an Audit of Financial Statements

6	SA 250	Consideration of Laws and Regulations in An Audit of Financial Statements
7	SA 260	Communication with Those Charged with Governance
8	SA 265	Communicating Deficiencies in Internal Control to Those Charged with Governance and Management
9	SA 299	Responsibility of Joint Auditors
10	SA 300	Planning an Audit of Financial Statements
11	SA 315	Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and its Environment
12	SA 320	Materiality in Planning and Performing an Audit
13	SA 330	The Auditor's Responses to Assessed Risks
14	SA 402	Audit Considerations Relating to an Entity Using a Service Organization
15	SA 450	Evaluation of Misstatements Identified during the Audits
16	SA 500	Audit Evidence
17	SA 501	Audit Evidence - Specific Considerations for Selected Items
18	SA 505	External Confirmations
19	SA 510	Initial Audit Engagements-Opening Balances
20	SA 520	Analytical Procedures
21	SA 530	Audit Sampling
22	SA 540	Auditing Accounting Estimates, Including Fair Value Accounting Estimates, and Related Disclosures
23	SA 550	Related Parties
24	SA 560	Subsequent Events
25	SA 570	Going Concern
26	SA 580	Written Representations
27	SA 600	Using the Work of Another Auditor
28	SA 610	Using the Work of Internal Auditors
29	SA 620	Using the Work of an Auditor's Expert
30	SA 700	Forming an Opinion and Reporting on Financial Statements

31	SA 705	Modifications to the Opinion in the Independent Auditor's Report
32	SA 706	Emphasis of Matter Paragraphs and Other Matter Paragraphs in the Independent Auditor's Report
33	SA 710	Comparative Information – Corresponding Figures and Comparative Financial Statements
34	SA 720	The Auditor's Responsibility in Relation to Other Information in Documents Containing Audited Financial Statements

II. Statements

1. Statement on Reporting under Section 227(1A) of the Companies Act, 1956.
2. Statement on the Companies (Auditor's Report) Order, 2003.

III. Guidance Notes

1. Guidance Note on Audit of Inventories.
2. Guidance Note on Audit of Debtors, Loans and Advances.
3. Guidance Note on Audit of Investments.
4. Guidance Note on Audit of Miscellaneous Expenditure.
5. Guidance Note on Audit of Cash and Bank Balances.
6. Guidance Note on Audit of Liabilities.
7. Guidance Note on Audit of Revenue.
8. Guidance Note on Audit of Expenses.

Notes

Applicability of Pronouncements/Legislative Amendments/Circulars etc. for November, 2014 – Intermediate (IPC) Examination

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PAPER – 6: AUDITING AND ASSURANCE

PART – I : ACADEMIC UPDATE
(Legislative Amendments as per the Companies Act, 2013)

1. Payments controlled by the Companies Act, 2013:

(a) Under section 180, the Board of Directors of a company except with the consent of the company by a special resolution exercises the following powers.

(i) to sell, lease or otherwise dispose of the whole or substantially the whole of the undertaking of the company or where the company owns more than one undertaking, of the whole or substantially the whole of any of such undertakings.

(ii) to invest otherwise in trust securities the amount of compensation received by it as a result of any merger or amalgamation;

(iii) to borrow money, where the money to be borrowed, together with the money already borrowed by the company will exceed aggregate of its paid-up share capital and free reserves, apart from temporary loans obtained from the company's bankers in the ordinary course of business:

Provided that the acceptance by a banking company, in the ordinary course of its business, of deposits of money from the public, repayable on demand or otherwise, and withdrawable by cheque, draft, order or otherwise, shall not be deemed to be a borrowing of monies by the banking company within the meaning of this clause.

(iv) to remit, or give time for the repayment of, any debt due from a director.

(b) Under section 181, the Board of Directors of a company can contribute to the bonafide charitable and other funds any amount in any financial year. Prior permission of the company in general meeting is required in case if the aggregate of such contribution exceeds 5% of its average net profits for the three immediately preceding financial years.

(c) Section 182 deals with prohibition and restriction regarding political contributions. According to this section, a government company or any other company which has been in existence for less than three financial years cannot contribute any amount directly or indirectly to any political party. In other cases, contribution in any financial year should not exceed 7½ % of average net profits during the three immediately preceding financial years.

(d) Section 183 permits the Board and other person to make contributions to the National Defence Fund or any other Fund approved by the Central Government for the purpose of National Defence to any extent as it thinks fit.

2. Allotment of shares and receipt of Allotment: (Section 39 of the Companies Act, 2013)

(i) Examine Director's Minutes Book to verify approval of allotments.

(ii) Compare copies of letters of allotment with entries in the Application and Allotment Book.

(iii) Trace entries in the Cash book into the Application and Allotment Book for the verification of amounts collected on allotment.

(iv) Trace the amount collected on application as well as those on allotment from the Application and Allotment Book into the Share Register.

(v) Check whether the amount stated in the prospectus as the minimum amount has been subscribed and the sums payable on such application have been received by the company.

(vi) Check that the amount payable on the application on every security is not less than five percent of the nominal amount of security or such other percentage or amount as may be prescribed by the SEBI.

(vii) If the stated minimum amount has not been subscribed and the sum payable on subscription is not received within a period of thirty days from the date of issue of the prospectus or such period as my be specified by the SEBI, check that the amount received above is returned within a period of fifteen days from the closure of the issue and if in case the amount is not repaid within such period, the directors in default shall jointly and severally be liable to repay that amount with interest at the rate of fifteen percent per annum.

(viii) Check totals of amounts payable on allotment and verify the journal entry debiting Share Allotment Account and crediting Share Capital Account.

3. Prohibition for buy back in certain circumstances : Section 70 of the Companies Act, 2013.

(1) No company shall directly or indirectly purchase its own shares or other specified securities—

(a) through any subsidiary company including its own subsidiary companies; or

(b) through any investment company or group of investment companies; or

(c) if a default, by the company, in repayment of deposit or interest payable thereon, redemption of debentures or preference shares or payment of dividend to any shareholder or repayment of any term loan or interest payable thereon to any financial institutions or bank, is subsisting. Provided that the buy – back is not prohibited if the default is remedied and a period of three years has elapsed since the cessation of the default.

(2) No company shall directly or indirectly purchase its own shares or other specified securities in case such company has not complied with provisions of Sections 92,123, 127 and 129. Section 92 relates to the filing of Annual Return, Section 123

and 127 to declaration and payment of dividend and Section 129 to the financial statement of the company.

4. Central Government to prescribe Accounting Standards (Section 133 of the Companies Act, 2013): Section 133 of the Companies Act, 2013 provides the provisions for Central Government to prescribe accounting standards. According to section 133 of the Companies Act, 2013:

   "Accounting Standards" means the standards of accounting or any addendum thereto as recommended by the Institute of Chartered Accountants of India (ICAI) constituted under section 3 of the Chartered Accountants Act, 1949, as may be prescribed by the Central Government in consultation with and after examination of the recommendations made by the National Financial Reporting Authority constituted under section 132 of the Companies Act, 2013.

   In respect of accounting standards, the role of National Financial Reporting Authority is limited to advise the Central Government on the accounting standards recommended by ICAI for adoption by companies.

   The Ministry of Corporate Affairs (MCA) vide General Circular No. 15/2013 dated 13th September, 2013 has clarified that till the Standards of Accounting or any addendum thereto are prescribed by Central Government in consultation and recommendation of the National Financial Reporting Authority, the existing Accounting Standards notified under the Companies Act, 1956 shall continue to apply.

5. Payment of Dividend in proportion to amount paid-up (Section 51 of the Companies Act, 2013): A company, if so authorised by its Articles, may pay dividend in proportion to the amount paid-up on each share.

PART – II : QUESTIONS AND ANSWERS

QUESTIONS

1. State with reason (in short) whether the following statements are true or false:

   (i) The principle of confidentiality precludes auditor to disclose the information about the client to a third party at all circumstances without any exception.

   (ii) It is no part of subsequent auditor's duty to verify opening balances of Ledger accounts of current years, on the basis of Balance Sheet audited by Previous Auditor.

   (iii) AS 10 "Accounting for Fixed Assets" is also applicable to wasting assets like quarries, minerals, oil and natural gases.

   (iv) When Government grants are received in the form of assets such as land, plant and equipments etc., free of cost, then, such assets should be entered in the books of accounts at nominal value.

(v) Confirmations received by the auditor directly from third parties are conclusive evidence in support of a transaction.

(vi) A branch auditor is a joint auditor according to SA 299 and his relationship with the company auditor is governed by the said Standard.

(vii) Branch auditor of a company should give photocopies of his working papers on demand by Company Auditor.

(viii) Events occurring after the balance sheet date must be disclosed in the financial statements.

(ix) When an auditor identifies a Misstatement resulting from fraud, it is his responsibility to communicate it to the regulatory and enforcement authorities apart, from those charged with governance.

(x) Internal check is part of internal control system.

2. Discuss with reference to SAs:

(a) While planning the audit of S Ltd. you want to apply sampling techniques. What are the risk factors you should keep in mind?

(b) What are the auditor's responsibilities in respect of corresponding figures?

(c) IT systems also pose specific risks to an entity's internal control. What are those risks?

Nature of Auditing

3. (a) Discuss the types of audits required under law.

(b) What are the inherent limitations of audit?

4. As a Statutory Auditor, how would you deal with the following?

(a) The Managing Director of the Company has committed a "Teeming and Lading" Fraud. The amount involved has been however subsequently after the year end deposited in the company.

(b) The accountant of C Ltd. has requested you, not to send balance confirmations to a particular group of debtors since the said balances are under dispute and the matter is pending in the court.

Basic Concepts in Auditing

5. What are the obvious assertions in the following items appearing in the Financial Statements?

(a) Profit and Loss Statement

Travelling Expenditure	₹ 50,000

(b) Balance Sheet

Trade receivable	₹ 2,00,000

6. (a) What are Audit working papers and why should they be carefully preserved by the Auditor?

   (b) Explain the advantages of "Audit Working Papers".

7. (a) What is "Audit Evidence"?

   (b) What are the various methods of obtaining audit evidence? Mention the same in brief.

   (c) Discuss the principles, which are useful in assessing the reliability of audit evidence.

Preparation for an Audit

8. (a) Explain concept of materiality and factors which act as guiding factors to this concept.

   (b) Describe a set of instructions, which an auditor has to give to his client before the start of actual audit.

9. Write short notes on the following:

   (a) Reliability of external confirmations.

   (b) Factors governing modes of communication of auditor with those charged with governance.

   (c) Procedures to be performed by the auditor in expressing opinion on 'going concern' assumption.

Internal Control

10. In a medium size trading organisation the accountant was given additional responsibility of making recoveries from the trade receivables. On one occasion, when an insurance claim of ₹ 25,000 was received, he credited the same to the account of a debtor and misappropriated the cash which he had recovered from the said debtor. Pinpoint weaknesses in the internal control system which led to this situation. Comment.

11. (a) Why are Computer Aided Audit Techniques (CAAT) required in EDP audit?

    (b) What are the advantages of CAATs?

Vouching & Verification of Assets and Liabilities

12. (a) What procedure an auditor should adopt to test the authenticity of cash at bank?

    (b) Give your comments and observations on no entry is passed for cheques received by the auditee on the last day of the year, but not yet deposited with the bank.

13. How will you verify/vouch the following:

    (a) Sale proceeds of Scrap Material.

    (b) Trade Marks and Copyrights.

(c) Machinery acquired under Hire-purchase system.

(d) Work-in-progress.

14. XYZ Ltd. Co. gave a donation of ₹ 50,000 each to a Charitable Society running a school and a trust set up for the service of Blind during financial year ending on 31st March, 2014. The average net profits of the company for the last three years were 15 lakhs. Comment.

The Company Audit

15. (a) Under what circumstances the retiring Auditor cannot be reappointed?

(b) Explain the concept of joint audit. Discuss its advantage and disadvantage.

16. As an auditor, comment on the following situations/statements:

(a) The sale and purchases of investments of A Ltd., was controlled through a committee. Shri B sold some of the investments without discussing the same with the other members of the committee as they were out of station and Shri B believed that its price would fall and the company would suffer a loss if it is not sold. A Ltd. earned a profit of ₹ 1 lakh from such sale.

(b) The company due to liquidity crises sold and leased back the same vehicles from leasing companies. In the notes to accounts, the company stated 'Vehicles taken on lease repayable in 46 instalments of ₹ 26,650 each'.

(c) No depreciation provided on a machinery costing ₹ 50 lakhs imported three years back, since it is yet to be put into use.

17. (a) State the basic elements of the Auditor's Report.

(b) When does an auditor issue unqualified opinion and what does it include?

18. As an auditor, how will you verify application and allotment money received on shares issued for cash?

Special Audits

19. (a) State any five special points which you, as an auditor, would look into while examining the income and collection of fund by an NGO engaged in providing relief work for flood victims.

(b) You are approached by a partnership firm to list out the advantages that will accrue to them, if the accounts are audited. State five important advantages.

20. An audit of Expenditure is one of the major components of Government Audit. In the context of 'Government Expenditure Audit', write in brief, what do you understand by:

(i) Audit against Rules and Orders

(ii) Audit of Sanctions

(iii) Audit against Provision of Funds

(iv) Propriety Audit

(v) Performance Audit

SUGGESTED ANSWERS / HINTS

1. (i) False: The principle of confidentiality is one of the basic principles of auditing. Auditor is generally not expected to disclose the information of his client to others. But it is not the case always. He can disclose the information to others if (a) permitted by his client or (b) he has to disclose it as per any statutory obligation dictated by any law.

(ii) False: According to SA 510 "Initial Audit Engagements - Opening Balances", it is the responsibility of the auditor to verify and obtain appropriate evidence in respect of opening balances brought forward from the preceding period.

(iii) False: AS 10 "Accounting for Fixed Assets" clearly states that this Accounting Standard is not applicable to wasting assets like quarries, minerals oil and natural gas.

(iv) True: According to AS 12 "Accounting for Government Grants " when Government grants in the form of non-monetary assets such as land, plant and equipments etc. are received free of costs then such assets should be entered in the books of account at nominal value.

(v) False: Confirmations received directly from the third parties by the auditor are more reliable but same cannot be treated as conclusive evidence.

(vi) False: Branch auditor is not a joint auditor within the meaning of SA 299. He is another auditor within the meaning of SA 600.

(vii) False: As per SA 230 on "Audit Documentation", audit documentation is the property of the auditor. He may at his discretion, make portions of, or extracts from, audit documentation available to clients, provided such disclosure does not undermine the validity of the work performed, or, in the case of assurance engagements, the independence of the auditor or of his personnel.

Main auditor does not have right of access to the working papers of the branch auditor. In the case of a company, the main auditor has to consider the report of the branch auditor and has a right to seek clarification and to visit the branch but cannot ask for the copy of working papers and therefore, the branch auditor is under no compulsion to give photocopies of his working papers to the principal auditor of the Company.

(viii) False: As per AS-4 on "Contingencies and Events Occurring After the Balance Sheet Date", Events occurring after the balance sheet date which do not affect the figures stated in the financial statements would not normally require disclosure in the financial statements although they may be of such significance that they may require a disclosure in the report of the approving authority to enable users of financial statements to make proper evaluations and decisions.

(ix) True: As per SA 240 "The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements" an auditor identifies a misstatement resulting from fraud or error it is his responsibility to communicate the matter with those charged with the governance and, in some circumstances, when so required by laws or regulations, to regulatory and enforcement authorities also.

(x) True: Internal check has been defined as "checks on day-to-day transactions which operate continuously as part of the routine system whereby the work of one person is proved independently or is complementary to the work of another, the object being the prevention or early detection of errors or fraud". Internal check is a part of the overall internal control system and operates as a built-in device as far as the staff organisation and job allocation aspects of the control system are concerned.

2. (a) Risk Factors while applying sampling techniques: As per SA 530(Revised) "Audit Sampling", sampling risk is the risk that the auditor's conclusion based on a sample may be different from the conclusion if the entire population were subjected to the same audit procedure. Sampling risk can lead to two types of erroneous conclusions.

(i) In the case of a test of controls, that controls are more effective than they actually are, or in the case of tests of details, that a material misstatement does not exists when in fact it does. The auditor is primarily concerned with this type of erroneous conclusion because it affects audit effectiveness and is more likely to lead to an inappropriate audit opinion.

(ii) In the case of test of controls, the controls are less effective than they actually are, or in the case of tests of details, that a material misstatements exists when in fact it does not. This type of erroneous conclusion affects audit efficiency as it would usually lead to additional work to establish that initial conclusions were incorrect.

(b) Auditor's responsibilities in respect of corresponding figures: As per SA 710 "Comparative Information—Corresponding Figures and Comparative Financial Statements", in respect of corresponding figures, the auditor shall determine whether the financial statements include the comparative information required by the applicable financial reporting framework and whether such information is appropriately classified. For this purpose, the auditor shall evaluate whether:

(i) The comparative information agrees with the amounts and other disclosures presented in the prior period; and

(ii) The accounting policies reflected in the comparative information are consistent with those applied in the current period or, if there have been changes in accounting policies, whether those changes have been properly accounted for and adequately presented and disclosed.

If the auditor becomes aware of a possible material misstatement in the comparative information while performing the current period audit, the auditor shall perform such additional audit procedures as are necessary in the circumstances to obtain sufficient appropriate audit evidence to determine whether a material misstatement exists. If the auditor had audited the prior period's financial statements, the auditor shall also follow the relevant requirements of SA 560 "Subsequent Events".

As required by SA 580, "Written Representations", the auditor shall request written representations for all periods referred to in the auditor's opinion. The auditor shall also obtain a specific written representation regarding any prior period item that is separately disclosed in the current year's statement of profit and loss.

(c) Specific Risk to an Entity's internal Control: As per SA 315 "Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and its Environment", IT system also poses specific risks to an entity's Internal Control. They are–

(i) Reliance on systems or programs that are inaccurately processing data, processing inaccurate data or both

(ii) Unauthorised access to data that may result in destruction of data or improper changes to data, including the recording of unauthorized or non existent transactions, or inaccurate recording of transactions. Particular risk may arise when multiple users access a common database.

(iii) The possibility of IT personnel gaining access beyond those necessary to perform their assigned duties thereby breaking down segregation of duties.

(iv) Unauthorised changes to data in Master files

(v) Unauthorised changes to systems or programs.

(vi) Failure to make necessary changes to systems or programs.

(vii) In appropriate manual intervention

(viii) Potential loss of data or inability to access data as required.

3. (a) Audits required under Law: Audit is not legally obligatory for all types of business organisations or institutions. On this basis audits may be of two broad categories i.e., audit required under law and voluntary audits.

The organisations which require audit under law are the following:

(i) Companies governed by the Companies Act;

(ii) Banking companies governed by the Banking Regulation Act, 1949;

(iii) Electricity supply companies governed by the Electricity Supply Act, 1948;

(iv) Co-operative societies registered under the Co-operative Societies Act, 1912;

(v) Public and charitable trusts registered under various Religious and Endowment Acts;

(vi) Corporations set up under an Act of Parliament or State Legislature such as the Life Insurance Corporation of India.

(vii) Specified entities under various sections of the Income-tax Act, 1961.

(viii) Audit required under Sales-tax and VAT by various State Government.

(b) Inherent limitations of Audit: As per SA 200 "Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with Standards on Auditing", the objectives of an audit of financial statements, prepared with in a framework of recognised accounting policies and practices and relevant statutory requirements, if any, is to enable an auditor to express an opinion on such financial statements. In forming his opinion on the financial statements, the auditor follows procedures designed to satisfy him that the financial statements reflect a true and fair view of the financial position and operating results of the enterprise. The process of auditing, however, is such that it suffers from certain limitations, i.e. the limitation which cannot be overcome irrespective of the nature and extent of audit procedures. The limitations of an audit arise from:

(i) The Nature of Financial Reporting: The preparation of financial statements involves judgment by management in applying the requirements of the entity's applicable financial reporting framework to the facts and circumstances of the entity. In addition, many financial statement items involve subjective decisions or assessments or a degree of uncertainty, and there may be a range of acceptable interpretations or judgments that may be made. Consequently, some financial statement items are subject to an inherent level of variability which cannot be eliminated by the application of additional auditing procedures.

(ii) The Nature of Audit Procedures: There are practical and legal limitations on the auditor's ability to obtain audit evidence. For example:

1. There is the possibility that management or others may not provide, intentionally or unintentionally, the complete information that is relevant to the preparation and presentation of the financial statements or that has been requested by the auditor.

2. Fraud may involve sophisticated and carefully organised schemes designed to conceal it. The auditor is neither trained as nor expected to be an expert in the authentication of documents.

3. An audit is not an official investigation into alleged wrongdoing. Accordingly, the auditor is not given specific legal powers, such as the power of search, which may be necessary for such an investigation.

(iii) Timeliness of Financial Reporting and the Balance between Benefit and Cost: The relevance of information, and thereby its value, tends to diminish over time, and there is a balance to be struck between the reliability of information and its cost. There is an expectation by users of financial statements that the auditor will form an opinion on the financial statements within a reasonable period of time and at a reasonable cost, recognising that it is impracticable to address all information that may exist or to pursue every matter exhaustively on the assumption that information is in error or fraudulent until proved otherwise.

(iv) Other Matters that Affect the Limitations of an Audit: In the case of certain assertions or subject matters, the potential effects of the limitations on the auditor's ability to detect material misstatements are particularly significant. Such assertions or subject matters include:

- ♦ Fraud, particularly fraud involving senior management or collusion.
- ♦ The existence and completeness of related party relationships and transactions.
- ♦ The occurrence of non-compliance with laws and regulations.
- ♦ Future events or conditions that may cause an entity to cease to continue as a going concern.

Because of the limitations of an audit, there is an unavoidable risk that some material misstatements of the financial statements may not be detected, even though the audit is properly planned and performed in accordance with SAs.

4. (a) Fraud Committed by Managing Director: The Managing Director of the company has committed a "Teeming and Lading" fraud. The fact that the amount involved has been subsequently deposited after the year end is not important because the auditor is required to perform his responsibilities as laid down in SA 240, "The Auditor's responsibilities relating to Fraud in an Audit of Financial Statements". First of all, as per SA 240, the auditor needs to perform procedures whether the financial statements are materially misstated. Because an instance of fraud cannot be considered as an isolated occurrence and it becomes important for the auditor to perform audit procedures and revise the audit risk assessment. Secondly, the auditor needs to consider the impact of fraud on financial statements and its disclosure in the audit report. Thirdly, the auditor should communicate the matter to the Chairman and Board of Directors. Finally, in view of the fact that the fraud has been committed at the highest level of management, it affects the reliability of audit evidence previously obtained since there is a genuine doubt about representations of management. Finally, the auditor shall have to report

under CARO, 2003 indicating the nature and amount involved in respect of fraud noticed during the year.

(b) External confirmation Requests: SA 505, "External Confirmations", establishes standards on the debtor's use of external confirmation as a means of obtaining audit evidence. It requires that the auditor should employ external confirmation procedures in consultation with the management.

If management refuses to allow the auditor to send a confirmation request, the auditor shall:

(i) Inquire as to management's reasons for the refusal, and seek audit evidence as to their validity and reasonableness;

(ii) Evaluate the implications of management's refusal on the auditor's assessment of the relevant risks of material misstatement, including the risk of fraud, and on the nature, timing and extent of other audit procedures; and

(iii) Perform alternative audit procedures designed to obtain relevant and reliable audit evidence.

If the auditor concludes that management's refusal to allow the auditor to send a confirmation request is unreasonable, or the auditor is unable to obtain relevant and reliable audit evidence from alternative audit procedures, the auditor shall communicate with those charged with governance in accordance with "SA 260 Communication with Those Charged with Governance". The auditor also shall determine the implications for the audit and the auditor's opinion in accordance with "SA 705 Modifications to the Opinion in the Independent Auditor's Report".

5. (a) Travelling Expenditure: ₹ 50,000

- Expenditure has been actually incurred for the purpose of travelling.
- Travelling has been undertaken during the year under consideration.
- Total amount of expenditure incurred is ₹ 50,000 during the year.
- It has been treated as revenue expenditure and charged to profit and loss account.

(b) Trade receivable: ₹ 2,00,000

- These include all sales transaction occurred during the year.
- These have been recorded properly and occurred during the year
- These constitute assets of the entity.

These have been shown at proper value, i.e. after showing the deduction on account of provision for bad and doubtful debts.

6. (a) **Audit Working Papers:** As per SA 230(Revised) "Audit Documentation", audit Working Papers are the record of audit procedures performed, relevant audit evidence obtained, and conclusions the auditor reached.

Working papers are the

(i) Evidence of the auditor's basis for a conclusion about the achievement of the overall objective of the auditor; and

(ii) Evidence that the audit was planned and performed in accordance with SAs and applicable legal and regulatory requirements.

Besides they serve a number of additional purposes, including the following:

- Assisting the engagement team to plan and perform the audit.
- Assisting members of the engagement team responsible for supervision to direct and supervise the audit work, and to discharge their review responsibilities in accordance with SA 220.
- Enabling the engagement team to be accountable for its work.
- Retaining a record of matters of continuing significance to future audits.
- Enabling the conduct of quality control reviews and inspections in accordance with SQC 1.
- Enabling the conduct of external inspections in accordance with applicable legal, regulatory or other requirements.

Standard on Quality Control (SQC) 1, "Quality Control for Firms that Perform Audits and Reviews of Historical Financial Information, and Other Assurance and Related Services Engagements", issued by the Institute, provides that, unless otherwise specified by law or regulation, working papers are the property of the auditor. He may at his discretion, make portions of, or extracts from, working papers available to clients, provided such disclosure does not undermine the validity of the work performed, or, in the case of assurance engagements, the independence of the auditor or of his personnel

Retention of working papers: Working papers should be retained, long enough, for a period of time sufficient to meet the needs of his practice and satisfy any legal or professional requirement of record retention. SQC 1 requires firms to establish policies and procedures for the retention of engagement documentation. The retention period for audit engagements ordinarily is no shorter than seven years from the date of the auditor's report, or, if later, the date of the group auditor's report.

(b) Audit working papers constitute the basic records for the auditor in respect of the audit carried out by him. They constitute the link between the auditor's report and clients' record.

These include retention of permanent record in the nature of a document to show the actual audit work executed the nature of the, work, the extent of the work and important points, facts, dates and decisions having bearing on the audit of the accounts audited. The working papers, if properly maintained, can be used as defense in case of need. The audit working papers are found very useful in the following aspects as they:

(i) aid in the planning and performance of the audit;

(ii) aid in the supervision and review of the audit work;

(iii) provide evidence of the audit work performed to support the auditor's opinion; and

(iv) act as an evidence in the Court of law when a charge of negligence is brought against the auditor.

7. (a) Audit Evidence: As per SA 500 "Audit evidence" Information used by the auditor in arriving at the conclusions on which the auditor's opinion is based. Audit evidence includes both information contained in the accounting records underlying the financial statements and other information.

(b) Methods of Obtaining Audit Evidence: The auditor obtains evidence by one or more of the following methods:

Inspection: Inspection involves examining records or documents, whether internal or external, in paper form, electronic form, or other media, or a physical examination of an asset. Inspection of records and documents provides audit evidence of varying degrees of reliability, depending on their nature and source and, in the case of internal records and documents, on the effectiveness of the controls over their production. An example of inspection used as a test of controls is inspection of records for evidence of authorisation.

Some documents represent direct audit evidence of the existence of an asset, for example, a document constituting a financial instrument such as a inventory or bond. Inspection of such documents may not necessarily provide audit evidence about ownership or value. In addition, inspecting an executed contract may provide audit evidence relevant to the entity's application of accounting policies, such as revenue recognition.

Inspection of tangible assets may provide reliable audit evidence with respect to their existence, but not necessarily about the entity's rights and obligations or the valuation of the assets. Inspection of individual inventory items may accompany the observation of inventory counting.

Observation: Observation consists of looking at a process or procedure being performed by others, for example, the auditor's observation of inventory counting by the entity's personnel, or of the performance of control activities. Observation provides audit evidence about the performance of a process or procedure, but is limited to the point in time at which the observation takes place, and by the fact that the act of being observed may affect how the process or procedure is performed.

External Confirmation: An external confirmation represents audit evidence obtained by the auditor as a direct written response to the auditor from a third party (the confirming party), in paper form, or by electronic or other medium. External confirmation procedures frequently are relevant when addressing assertions associated with certain account balances and their elements. However, external confirmations need not be restricted to account balances only. For example, the auditor may request confirmation of the terms of agreements or transactions an entity has with third parties; the confirmation request may be designed to ask if any modifications have been made to the agreement and, if so, what the relevant details are. External confirmation procedures also are used to obtain audit evidence about the absence of certain conditions, for example, the absence of a "side agreement" that may influence revenue recognition.

Recalculation: Recalculation consists of checking the mathematical accuracy of documents or records. Recalculation may be performed manually or electronically.

Reperformance: Reperformance involves the auditor's independent execution of procedures or controls that were originally performed as part of the entity's internal control.

Analytical Procedures: Analytical procedures consist of evaluations of financial information made by a study of plausible relationships among both financial and non-financial data. Analytical procedures also encompass the investigation of identified fluctuations and relationships that are inconsistent with other relevant information or deviate significantly from predicted amounts.

Inquiry: Inquiry consists of seeking information of knowledgeable persons, both financial and non- financial, within the entity or outside the entity. Inquiry is used extensively throughout the audit in addition to other audit procedures. Inquiries may range from formal written inquiries to informal oral inquiries. Evaluating responses to inquiries is an integral part of the inquiry process.

Responses to inquiries may provide the auditor with information not previously possessed or with corroborative audit evidence. Alternatively, responses might provide information that differs significantly from other information that the auditor has obtained, for example, information regarding the possibility of management override of controls. In some cases, responses to inquiries provide a basis for the auditor to modify or perform additional audit procedures.

Although corroboration of evidence obtained through inquiry is often of particular importance, in the case of inquiries about management intent, the information available to support management's intent may be limited. In these cases, understanding management's past history of carrying out its stated intentions, management's stated reasons for choosing a particular course of action, and management's ability to pursue a specific course of action may provide relevant information to corroborate the evidence obtained through inquiry.

In respect of some matters, the auditor may consider it necessary to obtain written representations from management and, where appropriate, those charged with governance to confirm responses to oral inquiries.

(c) **Reliability of Audit Evidence:** The reliability of information to be used as audit evidence, and therefore of the audit evidence itself, is influenced by its source and its nature, and the circumstances under which it is obtained, including the controls over its preparation and maintenance where relevant. Therefore, generalisations about the reliability of various kinds of audit evidence are subject to important exceptions. Even when information to be used as audit evidence is obtained from sources external to the entity, circumstances may exist that could affect its reliability. For example, information obtained from an independent external source may not be reliable if the source is not knowledgeable, or a management's expert may lack objectivity. While recognising that exceptions may exist, the following generalisations about the reliability of audit evidence may be useful:

The reliability of audit evidence is increased when it is obtained from independent sources outside the entity.

The reliability of audit evidence that is generated internally is increased when the related controls, including those over its preparation and maintenance, imposed by the entity are effective.

Audit evidence obtained directly by the auditor (for example, observation of the application of a control) is more reliable than audit evidence obtained indirectly or by inference (for example, inquiry about the application of a control).

Audit evidence in documentary form, whether paper, electronic, or other medium, is more reliable than evidence obtained orally (for example, a contemporaneously written record of a meeting is more reliable than a subsequent oral representation of the matters discussed).

Audit evidence provided by original documents is more reliable than audit evidence provided by photocopies or facsimiles, or documents that have been filmed, digitized or otherwise transformed into electronic form, the reliability of which may depend on the controls over their preparation and maintenance.

8. (a) **Concept of materiality:** SA 320 "Materiality in Planning and Performing an Audit", establishes standards on the concept of materiality and the relationship with audit risk while conducting an audit. Hence, the auditor requires more reliable evidence in support of material items. SA 320 defines material items as relatively important and relevant items, i.e., items the knowledge of which would influence the decision of the user of financial statements. Financial statements materially affect if such statement is erroneously stated or omitted to be stated there in and economic decision of the users taken on the basis of such information is influenced by such misstatements or omissions.

The auditor has to ensure that such items are properly and distinctly disclosed in the financial statements.

The concept of materiality is fundamental to the process of accounting. It covers all the stages from recording to classification and presentation. It is very important for the auditor who has constantly to judge whether a particular item is material or not.

There is an inverse relationship between materiality and the degree of audit risk. The higher the materiality level, the lower the audit risk and vice versa. For example, the risk that a particular account balance or class of transactions could be misstated by an extremely large amount might be very low but the risk that it could be misstated by an extremely small amount might be very high.

Factors to be considered for determining materiality

(i) Item of materiality may be determined individually or in aggregate.

(ii) The materiality depends on the regulatory or legal considerations.

(iii) Materiality is not often reckoned with respect to quantitative details above. It has qualitative dimensions as well.

(iv) Even insignificant items in terms of quality may be material in special circumstances.

(v) Sometimes the materiality of an item in terms of quantity is described in law itself. For example, Schedule III requires disclosure of items of expenditures which are in excess of one percent or ₹ 1,00,000 whichever is higher.

(vi) An item whose impact is insignificant at present, but in future it may be significant, may be material item.

(b) **Following instructions are given by the auditor to the client before the start of audit:**

(i) The accounts should be total up and trial balance and final accounts to be kept ready.

(ii) Vouchers should be serially arranged.

(iii) Schedule of trade receivables and trade payables should be prepared.

(iv) Schedule of outstanding expenses, prepaid expenses and accrued income to be kept ready.

(v) A list of bad and doubtful debts should be prepared.

(vi) Schedule of investments should be prepared.

(vii) Certified list of goods returned to be prepared.

(viii) Statement of permanent capital expenditure to be prepared.

(ix) Schedule of deferred revenue expenditures to be prepared.

(x) Names and addresses of managers and other officers should be kept ready.

9. (a) **Reliability of external confirmations:** As per SA 505 "External Confirmation", the reliability of external confirmations depends among other factors, upon the application of appropriate procedures by the auditor in designing the external confirmation request, performing the external confirmation procedures, and evaluating the results of the external confirmation procedures.

The factors that affect the reliability of confirmations include:

(i) The control which the auditor exercises over confirmation request and responses;

(ii) The character of respondents and

(iii) Any restrictions included in the response or imposed by the management

(b) **Factors governing modes of communication of auditor with those charges with governance :** As per SA 260, "Communication with Those Charge with Governance" the auditor may decide whether to communicate orally or in writing, the extent of detail or summarisation in the communication, and whether to communicate in a structured or unstructured manner) may be affected by such factors as:

(i) The size, operating structure, control environment, and legal structure of the entity.

(ii) In the case of an audit of special purpose financial statements, whether the auditor also audits the entity's general purpose financial statements.

(iii) Legal requirements. In some jurisdictions, a written communication with those charged with governance is required in a prescribed form by local law.

(iv) The expectations of those charged with governance, including arrangements made for periodic meetings or communications with the auditor.

(v) The amount of ongoing contact and dialogue the auditor has with those charged with governance.

(vi) Whether there have been significant changes in the membership of a governing body

(c) **Procedures to be performed by the auditor in expressing opinion on 'going concern' assumption:** As per SA 570, "Going Concern", the following are the relevant procedures that are relevant in this connection:

- Analyse and discuss cash flow, profit and other relevant forecasts with management.
- Review events after the balance sheet date for items affecting the entity's ability to continue as a going concern.

- Analyse and discuss the entity's latest available interim financial statements.
- Review the terms of debentures and loan agreements and determine whether any have been breached.
- Read minutes of the meetings of shareholders, the board of directors and important committees for reference to financing difficulties.
- Review the status of matters under litigation and claims.
- Confirm the existence, legality and enforceability of arrangements to provide or maintain financial support with related and third parties and assess the financial ability of such parties to provide additional funds.
- Consider the entity's position concerning unfilled customer orders.

10. Following two essential features of internal control are relevant here:

    (i) Breaking the chain of the work in a manner so that no single person can handle a transaction from the beginning to the end and

    (ii) Segregation of accounting and custodial functions.

    Weakness in internal control system in the instant case:

    (a) The accountant is receiving cash and also passing the entries in the books. The accountant should not have been allowed to effect recoveries.

    (b) It also appears that system for issuing receipts for amount received - whether cash or cheque is also lacking.

    (c) In a small and to some extent medium size organization, the supervision of the owner offsets the deficiencies in internal control system. But in this case, it appears, that supervision and personal control is also lacking.

    Thus, in the given case, the main weakness of the system is that it is ignoring the basic requirements of a good internal control system.

11. (a) Computer Aided Audit Techniques (CAATs): The use of computers may result in the design of systems that provide less visible evidence than those using manual procedures. CAATs are such techniques applied through the computer which are used in the verifying the data being processed by it. System characteristics resulting from the nature of EDP processing that demand the use of Computer Aided Audit Techniques (CAAT) are:

    (i) *Absence of input documents*: Data may be entered directly into the computer systems without supporting documents. In on-line transaction systems, written evidence of individual data entry authorization, e.g., credit limit approval may not be available.

    (ii) *Lack of visible transaction trail*: Certain data may be maintained on computer files only. In a manual system, it is normally possible to follow a transaction through the system by examining source documents, books of account, records, files and reports. In an EDP environment, however, the transaction trail may be partly in machine-readable form, and it may exist only for a limited period of time.

(iii) *Lack of visible output*: In a manual system, it is normally possible to examine visually the results of processing. In EDP systems, the results of processing may not be printed or only a summary data may be printed. Thus, the lack of visible output may result in the need to access data retained on machine readable files.

(iv) *Ease of Access to data and computer programmes*: Data and computer programmes may be altered at the computer or through the use of computer equipment at remote locations. Therefore, in the absence of appropriate controls, there is an increased potential for unauthorized access to, and allocation of, data and programmes by persons inside or outside the entity.

(b) Advantages of CAAT:

(i) *Audit effectiveness*: The effectiveness and efficiency of auditing procedures will be improved through the use of CAAT in obtaining and evaluating audit evidence, for example –

(a) Some transactions may be tested more effectively for a similar level of cost by using the computer.

(b) In applying analytical review procedures, transactions or balance details of unusual items may be reviewed and reports got printed more efficiently by using the computer.

(ii) *Savings in time*: The auditor can save time by reviewing the EDP controls using CAAT than through other audit procedures.

(iii) *Effective test checking and examination in depth*: CAAT permits effective examination in depth of selected transactions since the auditor constructs the lost audit trail.

12. (a) Verification of Cash at Bank: While testing the authenticity of cash at bank, the following areas may be considered by the auditor:

(i) Apart from comparing the entries in the cash book with those in the Pass Book the auditor should obtain a certificate from the bank confirming the balance at the close of the year as shown in the Pass Book.

(ii) Examine the bank reconciliation statement prepared as on the last day of the year and see whether (a) cheques issued by the entity but not presented for payment, and (b) cheques deposited for collection by the entity but not credited in the bank account have been duly debited/credited in the subsequent period.

(iii) Pay special attention to those items in the reconciliation statements which are outstanding for an unduly long period. The auditor should ascertain the reasons for such outstanding items from the management. He should also examine whether any such items require an adjustment write-off.

(iv) Examine relevant certificates in respect of fixed deposits or any type of deposits with banks duly supported by bank advices.

(v) The auditor should examine the possibility, that even though the balance in an apparently inoperative account may have remained stagnant, transactions may have taken place in that account during the year.

(vi) In relation to balances/deposits with specific charge on them, or those held under the requirements of any law, the auditor should examine that suitable disclosures are made in the financial statements.

(vii) Remittances shown as being in transit should be examined with reference to their credit in the bank in the subsequent period. Where the auditor finds that such remittances have not been credited in the subsequent period, he should ascertain the reasons for the same. He should also examine whether the entity has reversed the relevant entries in appropriate cases.

(viii) The auditor should examine that suitable adjustments are made in respect of cheques which have become stale as at the close of the year.

(ix) Where material amounts are held in bank accounts which are blocked, e.g. in foreign banks with exchange control restrictions or any banks which are under moratorium or liquidation, the auditor should examine whether the relevant facts have been suitably disclosed in the financial statements. He should also examine whether suitable adjustments on this account have been made in the financial statements in appropriate cases.

(x) Where the auditor finds that the number of bank accounts maintained by the entity is disproportionately large in relation to its size, the auditor should exercise greater care in satisfying himself about the genuineness of banking transactions and balances.

(b) Cheques Received on the last day of Accounting Year: It is a quite normal that in any ongoing business entity many a times cheques are received from the customers on the last day of the accounting year. It is also quite likely, that cheques received on the last day of the accounting year could not be deposited in the bank. Though normally speaking, it is expected that all cheques should be deposited in the bank daily. But there may be a possibility that such cheques which are received particularly during the late hours could not be deposited in the bank. Therefore, it is quite important to ensure that the system of internal control is effective and such cheques should be properly accounted for to avoid any frauds and that the financial statements reflect a true and fair view.

As far as internal control system is concerned, it should be ensured that a list of such cheques is prepared in duplicate and a copy of the same has been sent to person controlling the trade receivables' ledger and a second copy is handed over to cashier along with the cheques received. The person who is controlling the trade receivables' ledger should ensure that proper accounting entries have been passed by crediting respective trade receivables' accounts. The balance of cheques-in-hand should also be disclosed along with the cash and bank balances in the financial statements.

13. (a) Sale Proceeds of Scrap Material

(i) Review the internal control on scrap materials, as regards its generation, storage and disposal and see whether it was properly followed at every stage.

(ii) Ascertain whether the organisation is maintaining reasonable records for the sale and disposal of scrap materials.

(iii) Review the production and cost records for determination of the extent of scrap materials that may arise in a given period.

(iv) Compare the income from the sale of scrap materials with the corresponding figures of the preceding three years.

(v) Check the rates at which different types of scrap materials have been sold and compare the same with the rates that prevailed in the preceding year.

(vi) See that scrap materials sold have been billed and check the calculations on the invoices.

(vii) Ensure that there exists a proper procedure to identify the scrap material and good quality material is not mixed up with it.

(viii) Make an overall assessment of the value of the realisation from the sale of scrap materials as to its reasonableness.

(b) Trade Marks and Copyrights

(i) Obtain schedule of Trade Marks and Copyrights duly signed by the responsible officer and scrutinise the same and confirm that all of them are shown in the Balance Sheet.

(ii) Examine the written agreement in case of assignment of Copyrights and Assignment Deed in case of transfer of trade marks. Also ensure that trade marks and copyrights have been duly registered.

(iii) Verify existence of copyright by reference to contract between the author and the entity and check the payment of royalty made to author.

(iv) See that the value has been determined properly and the costs incurred for the purpose of obtaining the trade marks and copyrights have been capitalised.

(v) Ascertain that the legal life of the trade marks and copyrights have not expired.

(vi) Ensure that amount paid for both the intangible assets is properly amortised having regard to appropriate legal and commercial considerations, as per the principles enunciated under AS 26 on Intangible Assets.

(c) Machinery acquired under Hire-purchase system

(i) Examine the Board's Minute Book approving the purchase on hire-purchase terms.

(ii) Examine the hire-purchase agreement carefully and note the description of the machinery, cost of the machinery, hire purchase charges, and terms of payment and rate of purchase.

(iii) Assets acquired under Hire Purchase System should be recorded at the full cash value with corresponding liability of the same amount. In case cash value is not readily available, it should be calculated presuming an appropriate rate of interest.

(iv) Hire purchased assets are shown in the balance sheet with an appropriate narration to indicate that the enterprise does not have full ownership thereof. The interest payable along with each installments, whether separately or included therein should be debited to the interest account and not to the asset account.

(d) Work-in-Progress: The audit procedures regarding work-in-progress are similar to those used for raw materials and finished goods. However, the auditor has to carefully assess the stage of completion of the work-in-progress for assessing the appropriateness of its valuation. For this purpose, the auditor may examine the production/costing records (i.e., cost sheets), hold discussions with the personnel concerned, and obtain expert opinion, where necessary. The auditor may advise his client that where possible the work-in-progress should be reduced to the minimum before the closing date. Cost sheets of work-in-progress should be verified as follows:

(i) Ascertain that the cost sheets are duly attested by the works engineer and works manager.

(ii) Test the correctness of the cost as disclosed by the cost records by verification of quantities and cost of materials, wages and other charges included in the cost sheets by reference to the records maintained in respect thereof.

(iii) Compare the unit cost or job cost as shown by the cost sheet with the standard cost or the estimated cost expected.

(iv) Ensure that the allocation of overhead expenses had been made on a rational basis.

Compare the cost sheet in detail with that of the previous year. If they vary materially, investigate the cause thereof.

(v) Ensure that the Work-in-Progress as at Balance Sheet date has been appropriately disclosed in Balance Sheet as per the requirements of Part I of Schedule VI of the Companies Act.

14. Donation to Charitable Institutions: Section 181 of the Companies Act, 2013 provides that the Board of Directors of a company may contribute to bona fide charitable and other funds with prior permission of the company in general meeting for such contribution in case any amount the aggregate of which, in any financial year, exceed five per cent of its average net profits for the three immediately preceding financial years.

Facts of the case: In the instant case, the company has given donation of ₹ 50,000/- each to the two charitable organisations which amounts to ₹ 1,00,000. Assuming that the charitable organisations are not related to the business of the company, the average profits of the last 3 years is ₹ 15 lakhs and the 5% of this works out to ₹ 75,000. Hence the maximum of donation could be ₹ 75,000 only. For excess of ₹ 25,000 the company is required to take prior permission in general meeting which is not been taken.

Conclusion: By paying donations of ₹ 1,00,000 which is more than ₹ 75,000, the Board has contravened the provisions of Section 181 of the Companies Act, 2013. Hence the auditor should qualify his report accordingly.

15. (a) In the following circumstances, as per the Companies Act, 1956, the retiring auditor cannot be reappointed:

(i) A specific resolution has not been passed to reappoint the retiring auditor.

(ii) The auditor proposed to be reappointed does not possess the qualification prescribed under section 226.

(iii) The proposed auditor suffers from the disqualifications under section 226(3) and 226(4).

(iv) He has given to the company notice in writing of his unwillingness to be reappointed.

(v) A resolution has been passed in AGM appointing somebody else or providing expressly that the retiring auditor shall not be reappointed.

(vi) A written certificate has not been obtained from the proposed auditor to the effect that the appointment or reappointment, if made, will be in accordance within the limits specified under section 224(1B).

(b) Joint Audit: The practices of appointing chartered accountants as joint auditors is quite widespread in big companies and corporations, joint audit basically implies pooling together the resources and expertise of more than one firm of auditors to render an expert job in a given time period which may be difficult to accomplish acting individually. It essentially involves sharing of the total work.

When more than one auditor is appointed to audit large entities, such auditors are called joint auditors. Joint auditors have a collective responsibility to report on the financial statements. SA 299, "Joint Audit" deals with duties, rights and professional responsibilities of joint auditors. The joint auditors should follow the principles of division of work and coordination while conducting joint audits.

Advantages of Joint Audit

(i) Pooling and sharing of expertise

(ii) Advantage of mutual consultation.

(iii) Lower work load

(iv) Better quality of work performance.

(v) Improved service to the client.

(vi) Displacement of the auditor of the company in a take-over often obviated.

(vii) In respect of multinational companies, the work can be spread using the expertise if the local firms which are in a better position to deal with detailed work and the local laws and regulations.

(viii) Lower staff development costs.

(ix) Lower costs to carry out the work.

(x) A sense of healthy competition towards a better performance.

Disadvantages of Joint Audit:

(i) The fees being shared.

(ii) Psychological problem where firms of different standing are associated in the joint audit.

(iii) General superiority complexes of some auditors.

(iv) Problems of coordination of the work.

(v) Areas of work of common concern being neglected.

(vi) Uncertainty about the liability for the work done.

(vii) Lack of clear definition of responsibility.

16. (a) Sale of Investments without Proper Authorisation: There should be proper authority for sale of investments. Detailed records regarding disposal of investments should be maintained along with proper documentation.

In the instant case, Mr. B had sold the investments without discussing the matter with the other committee members. This matter, therefore, needs to be addressed by the auditor as purchase and sale can only be authorised by the Committee.

The fact that Mr. B believed that the prices would fall and the company would suffer a loss if the investments are not sold is not good enough for Mr. B to act as per his discretion. A profit of ₹ 1 lakh from such sale is also not a sufficient reason to act since one cannot rule out the possibility of earning higher profits. The formation of the Committee by A Ltd, to control sale and purchase of investments is, perhaps, one of the best aspects of internal control system to eliminate the possibility of manipulation, if any, in sale and purchase of investments. The statutory auditor may however, examine whether there have been any other instances involving non-observance of internal control system and procedures. In any case, the Committee must approve the transaction and authorise the same from the view point of the statutory auditor.

(b) Sale and Leaseback of Vehicles: Under a lease agreement, the lessee acquires the right to use an asset for an agreed period of time in consideration for payment of rent to the lessor. The legal ownership of the asset remains with the lessor.

In the instant case, the company had sold vehicles to two leasing companies to meet its liquidity crises and took them back on lease. In the notes to the accounts it had disclosed about instalments payable to different leasing companies, but without disclosing the true nature of the transaction as covered by AS 19, "Leases".

The transaction entered into by the company is a classic case of sale and leaseback transaction. In case of such transactions, the sale price of assets and lease rentals normally do not represent fair value since the same are negotiated as a package. In case such a transaction is an operating lease and it is clear that the rentals and the sale price are established at fair value, then in effect it is a normal sale transaction and any profit or loss is normally recognised immediately.

If the sale price is below fair value, any profit or loss is recognised immediately, except that, if the loss is compensated by future rentals at below market price, it is deferred and amortized in proportion to the rental payments over the useful life of the asset.

If the sale price is above fair value, the excess over fair value is deferred and amortized over the useful life or the asset.

Therefore, it would be important for the auditor to determine whether the amount of instalments payable is fair having regard to sale price of assets. In case the leaseback is a finance lease, it is not appropriate to regard an excess of sales proceeds over the carrying amount as income.

Such excess is deferred and amortised over the lease term in proportion to the depreciation of the leased asset. Similarly, it is not appropriate to regard a deficiency as loss. Such deficiency is deferred and amortised over the lease term.

Further, disclosure shall have to be made separately of such transaction in terms of AS 5.

The auditor should, therefore, suitably qualify his report since proper disclosures have not been made as per the requirement of accounting standards.

(c) Non-provision of depreciation: As per AS 6 on "Depreciation Accounting", depreciation is a measure of the wearing out, consumption or other loss of value of a depreciable asset arising from use, effluxion of time or obsolescence through technology and market changes.

Thus, depreciation has to be charged even in case of these assets which are not used at all during the year but by mere effluxion of time provided such assets qualify as depreciable assets. When the machinery has been imported by one entity, it means it was intended to be used for the purpose of business.

Depreciation in respect of this machinery ought to have been provided in the accounts for all the previous years. If there is an intention to use an asset, though it may not have actually been used, it is a 'constructive' or 'passive' use and eligible for claim of depreciation.

Thus, the auditor should ensure compliance with all these requirements and in case of failure he should qualify the report.

17. (a) Basic elements of the Auditor's Report: As per SA 700, "Forming an Opinion and Reporting on Financial Statements", the auditor's report includes the following basic elements, ordinarily, in the following layout:

(i) Title;

(ii) Addressee;

(iii) Introductory Paragraph

(vi) Management's Responsibility for the Financial Statements.

(v) Auditor's Responsibility

(vi) Auditor's Opinion

(vii) Other Reporting Responsibilities

(viii) Signature of the Auditor

(ix) Date of Auditor's Report.

(x) Place of signature

(b) The auditor should express an unqualified opinion when he concludes that the financial statements give a true and fair view in accordance with the financial reporting framework used for preparation and presentation of the financial statements.

An unqualified opinion indicates that:

(i) The financial statements have been prepared using the generally accepted accounting principles and being constantly followed.

(ii) The financial statements comply with relevant statutory requirements and regulations.

(iii) All material matters relevant to proper presentation of the financial information, subject to statutory requirement, if applicable, have been adequately disclosed.

18. Verification of application and allotment money received on Shares Issued for Cash shall be carried out as under:

On Application: Verify the amount received along with the applications for shares in the following manner:

(i) Check entries in the Application and Allotment Book (or Sheets) with the original applications;

(ii) Check entries in the Application and the Allotment Book as regards deposits of money, received with the applications, with those in the Cash Book;

(iii) Vouch amounts refunded to the unsuccessful applicants with copies of Letters of Regret;

(iv) Check the totals columns in the Application and Allotment Book and confirm the journal entry debiting Share Application Account and crediting Share Capital Account.

On Allotment

(i) Examine Director's Minutes Book to verify approval of allotments.

(ii) Compare copies of letters of allotment with entries in the Application and Allotment Book.

(iii) Trace entries in the Cash book into the Application and Allotment Book for the verification of amounts collected on allotment.

(iv) Trace the amount collected on application as well as those on allotment from the Application and Allotment Book into the Share Register.

(v) Check whether the amount stated in the prospectus as the minimum amount has been subscribed and the sums payable on such application have been received by the company.

(vi) Check that the amount payable on the application on every security is not less than five percent of the nominal amount of security or such other percentage or amount as may be prescribed by the SEBI.

(vii) If the stated minimum amount has not been subscribed and the sum payable on subscription is not received within a period of thirty days from the date of issue of the prospectus or such period as my be specified by the SEBI, check that the amount received above is returned within a period of fifteen days from the closure of the issue and if in case the amount is not repaid within such period, the directors in default shall jointly and severally be liable to repay that amount with interest at the rate of fifteen percent per annum.

(v) Check totals of amounts payable on allotment and verify the journal entry debiting Share Allotment Account and crediting Share Capital Account.

19. (a) Five special points to be looked into while examining the income and collection of funds by an NGO engaged in providing relief work for flood victims are:-

(i) Grant donations and contributions received from various Government, other NGO, industry and public should be checked with reference to the grant letter, bank statements and ensured that they are properly accounted and banked.

(ii) Foreign contribution received should be checked with reference to the correspondence receipt issued, bank statement, conversion into local currency. It should be ensured that all such contributions are as per RBI guidelines and be kept in separate bank account.

(iii) In the case of any fund raising cultural or sports program, verify the internal control system, mode of receipt and the authority accountable. Ensure that all collections are duly receipted and deposited in the bank promptly.

(iv) Check the fee received from members with the register of members.

(v) Check interest and dividend received from investments with investment held.

(b) Advantages of audit of accounts of a partnership firm: Advantages are as follows (any five):

(i) Audited accounts provide a convenient and reliable means of settling accounts between the partners and thereby possibility of dispute among them is mitigated.

(ii) On the retirement/death of a partner, audited accounts constitutes a reliable evidence for computing the amount due to the retiring partner or representative of deceased partner.

(iii) Audited accounts are generally accepted by the Income tax authorities for computing the assessable income.

(iv) Audited accounts are relied upon by banks for advancing loan.

(v) Audited accounts can be helpful in the negotiation for sale or admission of a new partner.

(vi) It is an effective safeguard against any undue advantage being taken by a working partner as against the non working partners.

20. Government Expenditure Audit: Audit of government expenditure is one of the major components of government audit conducted by the office of C & AG. The basic standards set for audit of expenditure are to ensure that there is provision of funds authorised by competent authority fixing the limits within which expenditure can be incurred. Briefly, these standards are explained below:

(i) *Audit against Rules & Orders*: The auditor has to see that the expenditure incurred conforms to the relevant provisions of the statutory enactment and is in accordance with the financial rules and regulations framed by the competent authority.

(ii) *Audit of Sanctions*: The auditor has to ensure that each item of expenditure is covered by a sanction, either general or special, accorded by the competent authority, authorising such expenditure.

(iii) *Audit against Provision of Funds*: It contemplates that there is a provision of funds out of which expenditure can be incurred and the amount of such expenditure does not exceed the appropriations made.

(iv) *Propriety Audit*: It is required to be seen that the expenditure is incurred with due regard to broad and general principles of financial propriety. The auditor aims to bring out cases of improper, avoidable, or in fructuous expenditure even though the expenditure has been incurred in conformity with the existing rules and regulations. Audit aims to secure a reasonably high standard of public financial morality by looking into the wisdom, faithfulness and economy of transactions.

(v) *Performance Audit*: This involves that the various programmes, schemes and projects where large financial expenditure has been incurred are being run economically and are yielding results expected of them. Efficiency-cum-performance audit, wherever used, is an objective examination of the financial and operational performance of an organisation, programme, authority or function and is oriented towards identifying opportunities for greater economy, and effectiveness.

Applicability of Pronouncements/Legislative Amendments/Circulars etc. for November, 2014 – Intermediate (IPC) Examination

Paper 5: Advanced Accounting

Accounting Standards

AS 4 : Contingencies and Events occurring after the Balance Sheet Date

AS 5 : Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies

AS 11 : The Effects of Changes in Foreign Exchange Rates (Revised 2003)

AS 12 : Accounting for Government Grants

AS 16 : Borrowing Costs

AS 19 : Leases

AS 20 : Earnings Per Share

AS 26 : Intangible Assets

AS 29 : Provisions, Contingent Liabilities and Contingent Assets.

Non-Applicability of Ind ASs for November, 2014 Examination

The MCA has hosted on its website 35 Indian Accounting Standards (Ind AS) without announcing the applicability date. Students may note that these Ind ASs are not applicable for November, 2014 Examination.

Paper 6: Auditing and Assurance

I. Standards on Auditing (SAs)

S.No	SA	Title of Standard on Auditing
1	SA 200	Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with Standards on Auditing
2	SA 210	Agreeing the Terms of Audit Engagements
3	SA 220	Quality Control for Audit of Financial Statements
4	SA 230	Audit Documentation
5	SA 240	The Auditor's responsibilities Relating to Fraud in an Audit of Financial Statements

6	SA 250	Consideration of Laws and Regulations in An Audit of Financial Statements
7	SA 260	Communication with Those Charged with Governance
8	SA 265	Communicating Deficiencies in Internal Control to Those Charged with Governance and Management
9	SA 299	Responsibility of Joint Auditors
10	SA 300	Planning an Audit of Financial Statements
11	SA 315	Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and its Environment
12	SA 320	Materiality in Planning and Performing an Audit
13	SA 330	The Auditor's Responses to Assessed Risks
14	SA 402	Audit Considerations Relating to an Entity Using a Service Organization
15	SA 450	Evaluation of Misstatements Identified during the Audits
16	SA 500	Audit Evidence
17	SA 501	Audit Evidence - Specific Considerations for Selected Items
18	SA 505	External Confirmations
19	SA 510	Initial Audit Engagements-Opening Balances
20	SA 520	Analytical Procedures
21	SA 530	Audit Sampling
22	SA 540	Auditing Accounting Estimates, Including Fair Value Accounting Estimates, and Related Disclosures
23	SA 550	Related Parties
24	SA 560	Subsequent Events
25	SA 570	Going Concern
26	SA 580	Written Representations
27	SA 600	Using the Work of Another Auditor
28	SA 610	Using the Work of Internal Auditors
29	SA 620	Using the Work of an Auditor's Expert
30	SA 700	Forming an Opinion and Reporting on Financial Statements

31	SA 705	Modifications to the Opinion in the Independent Auditor's Report
32	SA 706	Emphasis of Matter Paragraphs and Other Matter Paragraphs in the Independent Auditor's Report
33	SA 710	Comparative Information – Corresponding Figures and Comparative Financial Statements
34	SA 720	The Auditor's Responsibility in Relation to Other Information in Documents Containing Audited Financial Statements

II. Statements

1. Statement on Reporting under Section 227(1A) of the Companies Act, 1956.
2. Statement on the Companies (Auditor's Report) Order, 2003.

III. Guidance Notes

1. Guidance Note on Audit of Inventories.
2. Guidance Note on Audit of Debtors, Loans and Advances.
3. Guidance Note on Audit of Investments.
4. Guidance Note on Audit of Miscellaneous Expenditure.
5. Guidance Note on Audit of Cash and Bank Balances.
6. Guidance Note on Audit of Liabilities.
7. Guidance Note on Audit of Revenue.
8. Guidance Note on Audit of Expenses.

Notes

PAPER – 7: INFORMATION TECHNOLOGY AND STRATEGIC MANAGEMENT

SECTION – A: INFORMATION TECHNOLOGY

QUESTIONS

1. Define the following terms briefly:
   - (i) Cache Memory
   - (ii) Six Sigma
   - (iii) Virtual Memory
   - (iv) Firewall
   - (v) Multiplexer
   - (vi) Operating System
   - (vii) Business Information System
   - (viii) Process (from a business perspective)
   - (ix) Expert System
   - (x) Identification Cards
2. Differentiate between the following:
   - (i) Client-Server Network and Peer-to-Peer Network
   - (ii) Ring Network and Star Network
   - (iii) Asynchronous and Synchronous Data Transmission
   - (iv) Data Store and Data Flow in Data Flow Diagrams
   - (v) Manual Information Processing Cycle and Computerized Information Processing Cycle
   - (vi) Tacit Knowledge and Explicit Knowledge
   - (vii) Hardware Encryption and Software Encryption
   - (viii) Information and Knowledge
   - (ix) Complex Instruction Set Computer (CISC) and Reduced Instruction Set Computer (RISC)
   - (x) Infrastructure as a Service (IaaS) and Software as a Service (SaaS)
3. Write short note on the following:
   - (i) Bluetooth
   - (ii) TCP/IP
   - (iii) Decision Table

(iv) Mesh Topology
(v) Artificial Intelligence
(vi) Mobile Commerce
(vii) Grid Computing
(viii) Smart Phone
(ix) Micro Architecture
(x) Value Chain Automation

Accounts BPM

4. Discuss the different cycles of an Account Business Process Management.

Controls in BPA

5. Define Controls and discuss their objectives and importance in Business Process Automation.

Internetwork Processors

6. What do you understand by Internetwork Processors? Discuss some of them, in brief.

Information Systems

7. What do you understand by the term "Information System"? Discuss its components.

Business Intelligence

8. Discuss Business Intelligence and its tools.

Business Process Automation

9. Discuss the steps involved in implementing Business Process Automation.

Information System Life Cycle

10. Discuss Information System Life Cycle in detail.

Database Management System

11. What do you understand by the term Database Management System? Discuss its advantages and disadvantages.

Telecommunication Media

12. What is Transmission Media? Discuss its various types.

Network Threats

13. Define Threat. What are various threats to a computer network's security?

Cloud Computing

14. Define Cloud Computing. What are the different types of clouds in a Cloud Computing Environment?

Mapping Systems

15. (a) Draw an E-R Diagram based on the following facts:

A bank records information about its customers and their accounts. A specific account can have many owners (customers), and a specific customer can own an have only one account at most. Information about customers includes their social security number, phone number, name and address. Information about accounts includes account number, type, and balance. Further, every customer can

(b) Analyze the completeness of the following reduced decision table:

	Table X	R1	R2	R3	R4	R5
C1	Condition A	Y	N	N	N	N
C2	Condition B	Y	Y	N	N	N
C3	Condition C	-	N	-	Y	N
C4	Condition D	-	-	-	N	N
A1	Action 1	X		X	X	
A2	Action 2		X			X

(c) An electric supply company charges the following rates for its domestic consumers:

No. of units consumed	Charges/unit (Rs.)
For the first 200 units	1.60
For the next 300 units	2.10
Over 500 units	3.90

Surcharge @ 20% of the bill is to be added to the charges.

Draw a Flow chart for the above, which will read the consumer number and the number of units consumed and print out the total charges with the consumer number and the units consumed.

SUGGESTED ANSWERS/HINTS

1. (i) Cache Memory: Cache (pronounced as cash) is a smaller but faster memory, which stores copies of the data from the most frequently used main memory locations so that processors or registers can access it more rapidly than main memory. It is the property of locality of reference, which allows improving substantially the effective memory access time in a computer system.

   (ii) Six Sigma: Six Sigma is a set of strategies, techniques, and tools for process improvement. It seeks to improve the quality of process outputs by identifying and removing the causes of defects and minimizing variability in manufacturing and business processes.

   (iii) Virtual Memory: Virtual Memory is not a separate device but an imaginary memory area supported by some Operating Systems (for example, Windows) in conjunction with the hardware. If a computer lacks the Random Access Memory (RAM) needed to run a program or operation, Windows uses virtual memory to compensate. Virtual memory combines computer's RAM with temporary space on the hard disk. When RAM runs low, virtual memory moves data from RAM to a space called a paging file thus freeing up RAM to complete its work. Thus, Virtual memory is an allocation of hard disk space to help RAM.

   (iv) Firewall: Firewall is a device that forms a barrier between a secure and an open environment when the latter environment is usually considered hostile, for example, the Internet. It acts as a system or combination of systems that enforces a boundary between more than one networks. In firewalls, access controls are common form of controls encountered in the boundary subsystem by restricting the use of system resources to authorized users, limiting the actions authorized users can take with these resources and ensuring that the users obtain only authentic system resources.

   (v) Multiplexer: A multiplexer is a communications processor that allows a single communications channel to carry simultaneous data transmissions from many terminals. Typically, a multiplexer merges the transmissions of several terminals at one end of a communications channel, while a similar unit separates the individual transmissions at the receiving end.

   (vi) Operating System: An Operating System (OS) is a set of computer programs that manages computer hardware resources and acts as an interface with computer applications programs. The operating system is a vital component of the system software in a computer system. Application programs usually require an operating system to function that provides a convenient environment to users for executing their programs. Some prominent Operating systems used nowadays are Windows 7, Windows 8, Linux, UNIX, etc.

(vii) **Business Information System:** Business Information Systems (BIS) may be defined as systems integrating Information Technology, people and business. BIS brings business functions and information modules together for establishing effective communication channels which are useful for making timely and accurate decisions and in turn contribute to organizational productivity and competitiveness.

(viii) **Process (from a business perspective):** From a business perspective, a process is a coordinated and standardized flow of activities performed by people or machines, which can traverse functional or departmental boundaries to achieve a business objective and creates value for internal or external customers.

(ix) **Expert System:** An Expert System (ES) is a computerized information system that allows non-experts to make decisions comparable to those of an expert. Expert Systems are used for complex or ill-structured tasks that require experience and specialized knowledge in narrow, specific subject areas. The aim of the Expert System is to have a team of seasoned specialists holding industry-wide experience and has leveraged its strengths to plan and execute a miscellaneous variety of projects for Defence, Government, Finance, Telecom, and Engineering sectors.

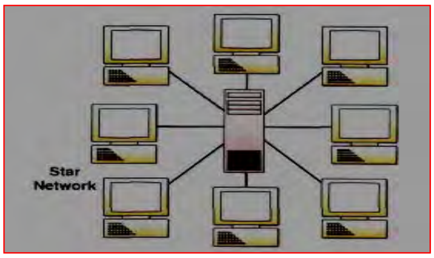
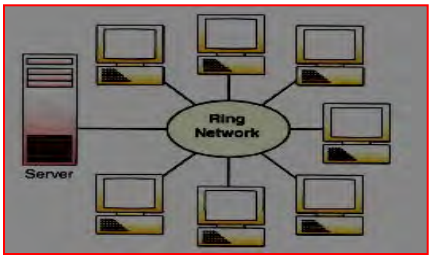
(x) **Identification Cards:** Identification cards are used to store information required in an authentication process. These cards that are used to identify a user need to go through procedural controls like application for a card, preparation of the card, issue of the card, use of the card and return of the card or card termination phases.

2. (i) Differences between Client Server Network and Peer-to-Peer Network are given below:

Client Server Network	Peer-to-Peer Network
A client computer typically communicates only with servers, not with other clients.	Every computer is equal and can communicate with any other computer on the network to which it has been granted access rights.
A central server handles all security and file transactions.	Each machine shares its own resources and handles its own security.
It is more expensive as it requires a central file server, server software and client licenses.	It is relatively less expensive as it does not require a dedicated machine, server software or special client licenses.
More secure.	Lesser secure as the network control is handed to the end-users.
Backup is centralized on the server; managed by network administrator. Backup by device and media only	Backup is decentralized; managed by users. Backup devices and media are required at each workstation.

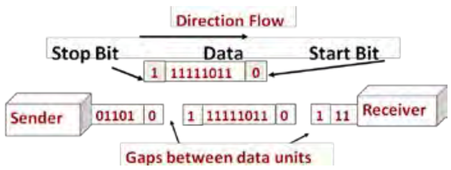
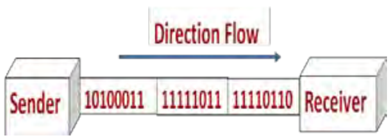
required at server.	
The performance is relatively high as the server is dedicated and does not handle other tasks.	The performance is relatively low.
In case of failure of server, the whole network fails.	No single point of failure in the network.
C/S model relies on the power and stability of a single computer ie. Server.	P2P gives each workstation equivalent capabilities and relies heavily on the power and bandwidth of each individual computer.
Example - Email, network printing, and the World Wide Web.	Example - Napster, Gnutella, Freenet, BitTorrent and Skype.

(ii) Differences between Star Network and Ring Network are given below:

Star Network	Ring Network
The central unit (server) in the network acts as the traffic controller among all the other computers tied to it under centralized approach.	Local computer processors are tied together sequentially in a ring with each device being connected to two other devices under a decentralized approach.
	
A node failure does not bring down the entire network. Failure of server affects the whole network.	Failure of one computer on the network can affect the whole network.
New nodes can be added easily without affecting rest of the network.	Moving, adding and changing the nodes can affect the network.
A star network is well suited to companies with one large data processing facility shared by a number of smaller departments.	Ring networks offer high performance for a small number of workstations or for larger networks where each station has a similar workload.
It is easier to diagnose network	It is difficult to troubleshoot a ring

problems through a central hub.	network.

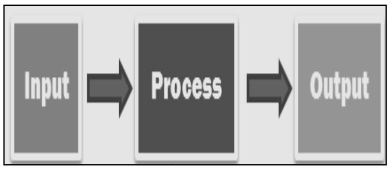
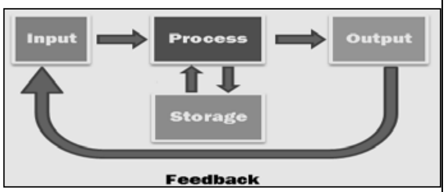
(iii) Differences between Asynchronous Data Transmission and Synchronous Data Transmission are as follows:

<table>
<tr><th>Asynchronous Transmission</th><th>Synchronous Transmission</th></tr>
<tr><td>The timing of signal is unimportant, Receiver accepts bytes with no regard to rhythm in which it is sent.</td><td>The bit stream combined into “frames” sent at a fixed rate using same clock signals at both sides.</td></tr>
<tr><td>Each data word is accompanied by Start-Stop bits.</td><td>Allows characters to be sent down the line without Start-Stop bits.</td></tr>
<tr><td>To alert the receiver to the arrival of new group of bytes, an extra bit 0, called Start bit is added in the beginning of the byte and a Stop bit 1, appended at the end of the byte to let receiver know that the byte is finished.</td><td>Each byte is transmitted without a gap, thus timing is very important at receiver’s end to accurately count the number of bits arriving.</td></tr>
<tr><td>
</td><td>
</td></tr>
<tr><td>Extra Start-Stop bits slow down the transmission process relatively.</td><td>Transmission is faster as in absence of Start-Stop bits, many data words can be transmitted per second.</td></tr>
<tr><td>It is relatively cheaper.</td><td>The synchronous device is more expensive to build as it must be smart enough to differentiate between the actual data and the special synchronous characters.</td></tr>
<tr><td>More reliable as the Start-Stop bits ensure that the sender and the receiver remain in step with one another.</td><td>Chances of data loss are relatively higher.</td></tr>
<tr><td>It is less efficient.</td><td>It is more efficient.</td></tr>
</table>

(iv) Data Store: A Data Store is where a process stores data between processes for later retrieval by that same process or another one. Files and tables are considered data stores. In Data Flow Diagrams, Data stores are usually drawn as a rectangle with the right hand side missing and labeled by the name of the data storage area it represents, though different notations do exist.

Data Flow: Data flow is the movement of data between the entity, the process and the data store. Data flow portrays the interface between the components of the DFD. The flow of data in a DFD is named to reflect the nature of the data used (these names should also be unique within a specific DFD). Data flow is represented by an arrow, where the arrow is annotated with the data name.

(v) Differences between Manual Information Processing cycle and Computerized Information Processing Cycle are as follows:

Manual Information Processing Cycle	Computerized Information Processing Cycle
These are the systems where the level of manual intervention is very high.	These are systems where computers are used at every stage of transaction processing.
The components of a manual information processing cycle include: Input, Processing and Output.	The components of a computerized information processing cycle include: Input, Processing, Storage and Output.
	
As the level of human intervention is very high, the quality of information generated from these systems is prone to flaws such as delayed information, inaccurate information, incomplete information and low levels of detail.	As the processing is computerized the quality of information generated from these systems is timely, accurate, fast and reliable.
Eg. valuation of exam papers, teaching, operations in operation theatres, ticket checking by railway staff in trains, buying of grocery, billing done by small medical shops, people maintaining books manually, etc.	Eg. Billing in shopping malls, Air Ticket reservation etc.

(vi) Differences between Explicit Knowledge and Tacit Knowledge are as follows:

Explicit Knowledge	Tacit Knowledge
Explicit knowledge is that knowledge	Tacit knowledge, on the other hand,

which can be formalized easily and as a consequence is easily available across the organization.	resides in a few often-in just one person and hasn't been captured by the organization or made available to others.
Explicit knowledge is articulated, and represented as spoken words, written material and compiled data.	Tacit knowledge is unarticulated and represented as intuition, perspective, beliefs, and values that individuals form based on their experiences.
This type of knowledge is codified, easy to document, transfer and reproduce.	It is personal, experimental and context-specific. It is difficult to document and communicate the tacit knowledge.
For example - Online tutorials, Policy and procedural manuals.	For example - hand-on skills, special know-how, employee's experiences.

(vii) Hardware Encryption: Hardware Encryption devices are available at a reasonable cost, and can support high speed traffic. If the Internet is being used to exchange information among branch offices or development collaborators, for instance, use of such devices can ensure that all traffic between these offices is secure.

Software Encryption: Software Encryption is typically employed in conjunction with specific applications. Certain electronic mail packages, for example, provide encryption and decryption for message security.

(viii) Differences between Information and Knowledge are given as follows:

Information	Knowledge
Information is piecemeal, fragmented and particular.	Knowledge is structured, coherent, and often universal.
Information is timely, transitory, and may even be short-lived.	Knowledge is of enduring significance.
Information is a flow of messages.	Knowledge is a stock, largely resulting from the flow, in the sense that the "input" of information may affect the stock of knowledge by adding to it, restructuring it, or changing it in any way.
Information is acquired by being told.	Knowledge can be acquired by thinking. Thus, new knowledge can be acquired without new information being received.

(ix) Differences between CISC and RISC are given as follows:

CISC	RISC
CISC stands for Complex	RISC stands for Reduced Instruction Set

Instruction Set Computer.	Computer.
CISC chips do all of the processing themselves.	RISC chips distribute some of their processing to other chips.
Emphasis on hardware.	Emphasis on software.
Includes multi-clock, complex instructions.	Includes single-clock, reduced instruction only.
CISC chips are more common in computers that have a wider range of instructions to execute.	RISC chips are finding their way into components that need faster processing of a limited number of instructions, such as printers and games machines.
The CISC approach attempts to minimize the number of instructions per program, sacrificing the number of cycles per instruction.	RISC does the opposite, reducing the cycles per instruction at the cost of the number of instructions per program.
Small code sizes, high cycles per second.	Low cycles per second, large code sizes.
Memory-to-Memory: "LOAD" and "STORE" incorporated in instructions.	Register-to-Register: "LOAD" and "STORE" are independent instructions.
Relatively lesser RAM is required.	Because there are more lines of code, more RAM is needed to store the assembly level instructions. The compiler must also perform more work to convert a high-level language statement into code of this form.
CISC chips have an increasing number of components and an ever increasing instruction set and so are always slower and less powerful at executing “common” instructions.	RISC chips have fewer components and a smaller instruction set, allowing faster accessing of “common” instructions.
After a CISC-style "MULT" command is executed, the processor automatically erases the registers. If one of the operands needs to be used for another computation, the processor must re-load the data from the memory bank into a register.	In RISC, the operand will remain in the register until another value is loaded in its place.
CISC chips are relatively slow per instruction, but use fewer instructions. Optimized for the	RISC chips are fewer, and relatively simpler and faster than the large, complex and slower CISC instructions. However, more

programmer.	instructions are needed to accomplish a task. It's easier to write powerful optimized compilers, since fewer instructions exist.

(x) Infrastructure as a Service (IaaS): It is the foundation of cloud services. It provides clients with access to server hardware, storage, bandwidth and other fundamental computing resources. The service is typically paid for on a usage basis. The service may also include dynamic scaling so that if the customer needs more resources than expected, s/he can get them on the fly (probably to a given limit). It provides access to shared resources on need basis, without revealing details like location and hardware to clients.

Software as a Service (SaaS): It includes a complete software offering on the cloud. Users can access a software application hosted by the cloud vendor on pay-per-use basis. This is a well-established sector. SaaS is a model of software deployment where an application is hosted as a service provided to customers across the Internet. By removing the need to install and run an application on a user's own computer. It is seen as a way for businesses to get the same benefits as commercial software with smaller cost outlay. SaaS can alleviate the burden of software maintenance and support but users relinquish control over software versions and requirements.

3. (i) Bluetooth: Bluetooth is a wireless technology (low-power, short-range radio signal) standard for exchanging data over short distances up to 50 meters (164 feet) from fixed and mobile devices, creating Personal Area Networks (PANs) with high levels of security. It is a feature which is used every day through a number of compatible devices like USB, handheld PDA, phone headset and most popularly the mobile phone. Few devices that utilize Bluetooth technology are Keyboards and mice, Printers, Cell phones and headsets, PDAs (Personal Digital Assistants), Desktop and laptop computers, Digital cameras, and Remotes: replacing IR (infrared).Through the use of a mobile phone; we can send pictures, videos, exchange business cards and also transfer files to our PC. Both data and voice transmissions can be sent and received through the use of short range networks.

(ii) TCP/IP: The Internet uses a system of telecommunications protocol suite called as Transmission Control Protocol/Internet Protocol (TCP/IP). TCP/IP consists of five levels of protocols that can be related to the seven layers of the OSI architecture. TCP/IP is used by the Internet and by all Intranets and extranets. Many companies and other organizations are also converting their client/server networks to TCP/IP. Five layers of TCP/IP are as follows:

- Application or Process layer: This layer provides communications services for end user applications and appropriate data transmission formats and codes and supports the accomplishment of telecommunications sessions.

- **Host-to-Host Transport layer:** This layer supports the organization and transfer of data between nodes in the network.
- **Internet Protocol (IP):** This layer provides appropriate routing by establishing connections among network links.
- **Network Interface:** This layer supports error-free organization and transmission of data in the network.
- **Physical layer:** This layer provides physical transmission of data on the telecommunications media in the network.

(iii) **Decision Table:** A Decision Table is a table which may accompany a flowchart, defining the possible contingencies that may be considered within the program and the appropriate course of action for each contingency. A Decision Table is divided into four quadrants:

Condition Stub	Condition Entries
Action stub	Action Entries

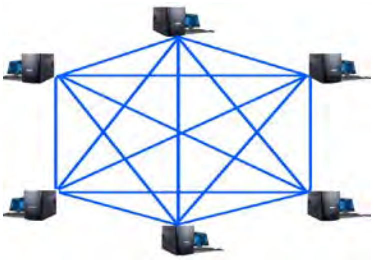
(a) **Condition Stub -** which comprehensively lists the comparisons or conditions;

(b) **Action Stub** - which comprehensively lists the actions to be taken along the various program branches;

(c) **Condition Entries -** which list in its various columns the possible permutations of answer to the questions in the conditions stub; and

(d) **Action Entries** - which lists, in its columns corresponding to the condition entries the actions contingent upon the set of answers to questions of that column.

(iv) **Mesh Topology:** In this topology, there is random connection of nodes using communication links. A mesh network may be fully connected as shown in Figure or connected with only partial links. In fully interconnected topology, each node is connected by a dedicated point to point link to every node. The reliability is very high as there are always alternate paths available if direct link between two nodes is down or dysfunctional. Fully connected networks are not very common because of the high cost. Only military installations, which need high degree of redundancy, may have such networks, that too with a small number of nodes.



Advantages of mesh network are as under:

- Yields the greatest amount of redundancy in the event that if one of the nodes fails, the network traffic can be redirected to another node.
- Network problems are easier to diagnose.

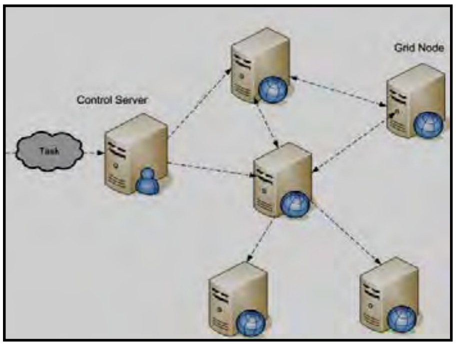
Disadvantage of mesh network is its high cost of installation and maintenance (more cable is required than any other configuration).

(v) **Artificial Intelligence:** Artificial Intelligence (AI) is the vicinity of computer science focusing on creating machines that can fit into place on behaviours that humans regard as intelligent. It is a research field that studies how to comprehend the intelligent human behaviours on a computer. The decisive objective of AI is to make a computer that can discover, sketch, and crack problems in parallel. A significant driver for any application of artificial intelligence is fresh and innovative code.

The subject of Artificial Intelligence spans a wide horizon dealing with various kinds of knowledge representation schemes, different techniques of intelligent search, various methods for resolving uncertainty of data and knowledge, different schemes for automated machine learning and many others. Expert Systems, Pattern Recognition, Natural language processing are some of the various purposes on which AI may be applied.

(vi) **Mobile Commerce:** Mobile Commerce (m-Commerce) is about the explosion of applications and services that are becoming accessible from Internet-enabled mobile devices. It involves new technologies, services and business models. M-commerce is the buying and selling of goods and services through wireless handheld devices such as cellular telephone and Personal Digital Assistants (PDAs). m-Commerce enables users to access the Internet without needing to find a place to plug in. Some of the industries that are affected by m-commerce include Financial Services, Telecommunications, Service/Retail and Information Services.

(vii) **Grid Computing:** Grid Computing is a computer network in which each computer's resources are shared with every other computer in the system. A Grid Computing System can be as simple as a collection of similar computers running on the same operating system or as complex as inter-networked systems comprised of every computer platform we can think of. Processing power, memory and data storage are all community resources that authorized users can tap into and leverage for specific tasks through a typical grid model as shown in the figure.



In the ideal grid computing system, every resource is shared, turning a computer network into a powerful supercomputer. Every authorized computer would have access to enormous processing power and storage capacity.

(viii) Smart Phone: A Smart Phone is a mobile phone built on a mobile operating system, with more advanced computing capability connectivity than a feature phone. A Smart Phone could be considered to be the combination of the traditional PDA and cellular phone, with a bigger focus on the cellular phone part. This handheld device integrates mobile phone capabilities with the more common features of a handheld computer or PDA. Smartphone allows users to store information, e-mail and install programs, along with using a mobile phone in one device. Modern smart phones include high-resolution touch screens and web browsers that display standard web pages as well as mobile-optimized sites. High-speed data access is provided by Wi-Fi and mobile broadband.

(ix) Micro Architecture: Also known as Computer organization, it is a lower level detailed description of the system that is sufficient for completely describing the resources and methods used to achieve architecture specification of the computing system, and how they are inter-connected and inter-operated in order to implement the ISA. The term typically includes the way in which these resources are organized as well as the design techniques used in the processor to reach the target cost and performance goals. The Micro architecture can be seen as how the Instruction Set Architecture does and what it does. It's how everything is ultimately organized on the chip or processor.

(x) Value Chain Automation: Value Chain refers to separate activities which are necessary to strengthen an organization's strategies and are linked together both inside and outside the organization. It is defined as a chain of activities that a firm operating in a specific industry performs in order to deliver a valuable product or service for the market. The idea of the Value Chain is based on the process view of organizations, the idea of seeing a manufacturing (or service) organization as a system, made up of subsystems each with inputs, transformation processes and outputs. For example - Value chain of a manufacturing organization comprises of primary activities that include inbound logistics, operations, outbound logistics, marketing and sales, and services; and the supportive activities that relate to procurement, human resource management, technology development and infrastructure. Some of the business functions of the value chain are - Research and development; Design of products, services, or processes; Production; Marketing and sales; Distribution and Customer service.

4. The processing cycles of an Accounts Business Process Management are namely Financing Cycle, Revenue Cycle, Expenditure Cycle, Human Resource and the General Ledger & Reporting Systems and the flow of data between them. These systems are discussed as follows:

(i) **Financing Cycle:** A transaction processing cycle combines one or more types of transactions having related features or similar objectives. The cycle consists of a set of transactions leading to the recognition of a major economic event on the financial statements. It is through the study of transaction cycles that we gain a clear view of a firm's processing framework.

(ii) **Revenue Cycle:** It includes transactions surrounding the recognition of revenue involving accounts like Sales, Accounts Receivable, Inventory and General Ledger. It involves capturing and recording of customer orders; shipment of the goods; recording of the cost of goods sold; the billing process and the recording of sales and accounts receivable; and capturing and recording of cash receipts. Common Source Documents & functions of Revenue Cycle are as follows:

Source Document	Function
Sales Order	Record Customer Order
Delivery Ticket	Record Delivery to Customer
Remittance Advice	Receive Cash
Deposit Slip	Record Amounts Deposited
Credit Memo	Support Adjustments to Customer Accounts

(iii) **Expenditure Cycle:** It includes transactions surrounding the recognition of expenditures involving accounts like Purchases, Accounts Payable, Cash Disbursements, Inventory and General Ledger. It includes preparation and recording of purchase orders; receipt of goods and the recording of the cost of inventory; receipt of vendor invoices; recording of accounts payable and preparation and recording of cash disbursements. The cycle also includes the preparation of employee pay-checks and the recording of payroll activities. Common Source Documents & functions of Revenue Cycle are as follows:

Source Document	Function
Purchase Requisition	Request that purchasing department order goods.
Purchase Order	Request goods from vendors.
Receiving Report	Record receipt of merchandise.
Check	Pay for items.

(iv) **Human Resource Cycle:** Common Source Documents & Functions are as follows:

Source Document	Function
W4 forms	Collect employee withholding data.
Time cards	Record time worked by employees.
Job time tickets	Record time spent on specific jobs.

(v) **General Ledger & Reporting System:** Common Source Document and its function is as follows:

General Ledger and Reporting System	
Journal Voucher	Record entry posted to general ledger.

(vi) **Data Processing Cycle:** In the Data Processing Cycle, the processes of business activities about which data must be collected and processed are identified. Further, the emphasize could be on the activities, resources affected by that event, the agents who participate in that event; where the event could be the Input, Output, Processing, Storage, Alerts, Controls and Feedback. All the above cycles of processing involves data processing activities which has been updated and stored. The stored information has details about the resources affected by the event and agents who participated in the activity.

5. **Controls:** Controls are defined as policies, procedures, practices and organization structure that are designed to provide reasonable assurance that business objectives are achieved and undesired events are prevented or detected and corrected.

Controls' Objectives

Major controls' objectives are given as follows:

- **Authorization –** This ensures that all transactions are approved by responsible personnel in accordance with their specific or general authority before the transactions are recorded.
- **Completeness –** This ensures that no valid transactions have been omitted from the accounting records.
- **Accuracy -** This ensures that all valid transactions are accurate, consistent with the originating transaction data, and information is recorded in a timely manner.
- **Validity -** This ensures that all recorded transactions fairly represent the economic events that actually occurred, are lawful in nature, and have been executed in accordance with management's general authorization.
- **Physical Safeguards and Security -** This ensures that access to physical assets and information systems are controlled and properly restricted to authorized personnel.
- **Error Handling -** This ensures that errors detected at any stage of processing receive prompts corrective action and are reported to the appropriate level of management.
- **Segregation of Duties -** This ensures that duties are assigned to individuals in a manner that ensures that no one individual can control both the recording function and the procedures relative to processing a transaction.

Importance of Controls in BPA

In today's computerized information systems, most of the business processes are being automated. Enterprises are increasingly relying on IT for business information and transaction processing. The innovations in IT components such as hardware, software, networking technology, communication technology and ever-increasing bandwidth are leading to evolution completely new business models.

All these new business models and new methods presume that the information required by business managers is available all the time and is accurate. However, there is a need to ensure that all information that is generated from system is accurate, complete and reliable for decision making, hence the requirement for proper controls.

6. Internetwork Processors: Telecommunications networks are interconnected by special-purpose communications processors called Internetwork Processors such as Switches, Routers, Hubs, Bridges, Repeaters and Gateways.

   - Switch - Switch is a communications processor that makes connections between telecommunications circuits in a network so that a telecommunications message can reach its intended destination.
   - Router – Router is a communications processor that interconnects networks based on different rules or protocols, so that a telecommunications message can be routed to its destination.
   - Hub – Hub is a port-switching communications processor. This allows for the sharing of the network resources such as servers, LAN workstations, printers, etc.
   - Bridge – Bridge is a communications processor than connects numerous Local Area Networks (LAN) that have the same set of communication rules or protocols. They can only be used to connect networks of the same type. It magnifies the data transmission signal while passing data from one LAN to another.
   - Repeater – Repeater is a communications processor that boosts or amplifies the signal before passing it to the next section of cable in a network.
   - Gateway – Gateway is a communications processor that connects networks that use different communication architectures.

7. Information System: Information System (IS) is a combination of people, hardware, software, communication devices, network and data resources that processes (can be storing, retrieving, transforming information) data and information for a specific purpose. The system needs inputs from user (key in instructions and commands, typing, scanning) which will then be processed (calculating, reporting) using technology devices such as computers, and produce output (printing reports, displaying results) that will be sent to another user or other system via a network and a feedback method that controls the operation. In general, any specific Information System aims to support operations, management and decision-making.

Components of Information System

The main aim and purpose of each Information System is to convert the data into information which is useful and meaningful. This process consists of four basic concepts:

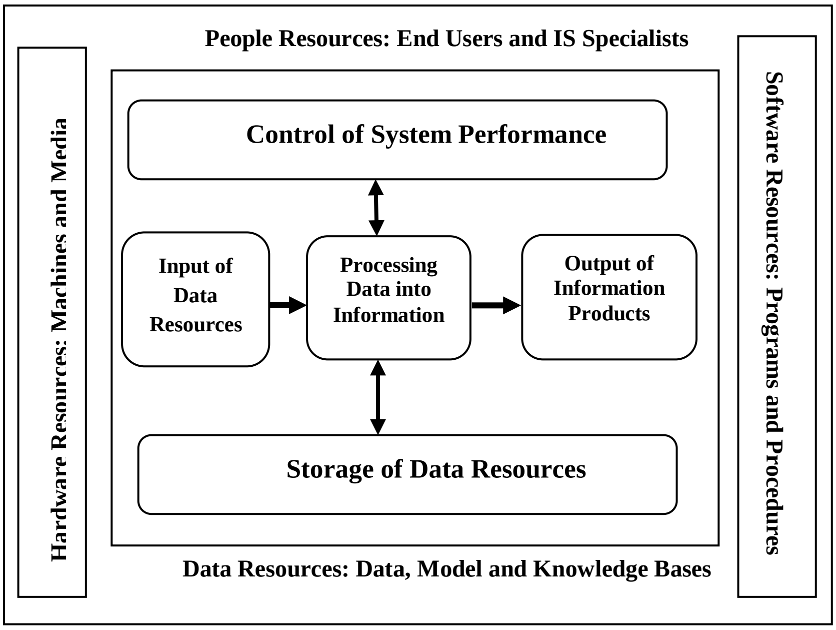
(i) People, Hardware, Software, and Data are four basic resources of information systems;

(ii) Human Resources consist of end users and IT specialists; Hardware involves machines and media; Software Resources consist of programs and procedures; and Data Resources include data, model, and knowledge base;

(iii) A Process is used to convert data into information for end users;

(iv) Information Processes consist of input, processing, output, storage, and control processes.

All components of information systems are mutually connected and cannot exist individually. The relationship between separated components is defined for best process efficiency. The output could be in terms of Printing, Reports, Graphics; Input can be data, information and instructions; Processing may involve calculations, programming and storing; Controls could be related to decision-making and the feedback.



Components of Information System

8. **Business Intelligence:** Business Intelligence (BI) may be defined as the delivery of accurate, useful information to the appropriate decision makers within the necessary time frame to support effective decision making for business processes. BI is comprised of

information that contains patterns, relationships, and trends about customers, suppliers, business partners and employees. BI is essentially timely, accurate, high-value, and actionable business insights, and the work processes and technologies used to obtain them. Business intelligence systems process, store and provide useful information to the user who need it, when they need it. BI can handle large amounts of information to help identify and develop new opportunities. Making use of new opportunities and implementing an effective strategy can provide a competitive market advantage and long-term stability.

Business Intelligence Tools

Business Intelligence tools are a type of software that is designed to retrieve, analyze and report data. Some of the key Business Intelligence tools are given as follows:

- Simple Reporting and Querying: This involves using the data warehouse to get response to the query: "Tell me what happened." The objective of a BI implementation is to turn operational data into meaningful knowledge. This requires that BI must be connected with the enterprise data and all the necessary data is available in one place, in one common format. Data warehousing (DW) provides the perfect architecture to combine all the data dispersed throughout the enterprise in different applications in a variety of formats, on a range of hardware, which could be anywhere to be cleaned up, summarized, converted and integrated into one common format and available centrally for further processing. There are reporting tools used to arrange information into a readable format and distribute it to the people who need it.
- Business Analysis: This involves using the data to get response to the query: "Tell me what happened and why." Business analysis refers to presenting visualizing data in a multidimensional manner. Business analysis allows the user to plot data in row and column coordinates to further understand the intersecting points. ETL (Extract, Transform, Load) tools bring in data from outside sources, transform it to meet business specified operational needs, and then load the results into the company database. Metadata tools tools gather and analyze metadata, helping to increase data quality.
- Dashboards: This involves using the information gathered from the data warehouse and making it available to users as snapshots of many different things with the objective of getting response to the query: "Tell me a lot of things, but without too much effort". Dashboards are flexible tools that can be bent into as many different shapes as per user requirements. It includes a collection of graphs, reports, and KPIs that can help monitor such business activities as progress on a specific initiative.
- Scorecards: This involves providing a visual representation of the enterprise strategy by taking critical metrics and mapping them to strategic goals throughout the enterprise. Scorecards offer a rich, visual gauge to display the performance of

specific initiatives, business units, or the enterprise as a whole and the individual goals in the context of larger enterprise strategy. Scorecards distil information into a small number of metrics and targets and provide users with an at -a-glance perspective of information. A scorecard has a graphical list of specific, attainable strategic milestones, combined with metrics that serve as benchmarks. Specific measures on how well the company has actually performed specified activities are linked in the scorecard with graphical display highlighting the status of each goal.

- Data Mining or Statistical Analysis: This involves using statistical, artificial intelligence, and related techniques to mine through large volumes of data and providing knowledge without users even having to ask specific questions. The objective is to provide interesting and useful information to users by design even without their querying. Data Mining involves data analysis for discovering useful patterns that are "hidden" in large volume of diverse data.

9. The steps in implementing Business Process Automation are discussed as below:

(i) Step 1: Define why we plan to implement a BPA?

The primary purpose for which an enterprise implements automation may vary from enterprise to enterprise. A list of generic reasons for going for BPA may include any or combination of the following:

- ♦ Errors in manual processes leading to higher costs.
- ♦ Payment processes not streamlined, due to duplicate or late payments, missing early pay discounts, and losing revenue.
- ♦ Paying for goods and services not received.
- ♦ Poor debtor management leading to high invoice aging and poor cash flow.
- ♦ Not being able to find documents quickly during an audit or lawsuit or not being able to find all documents.
- ♦ Lengthy or incomplete new employee or new account on-boarding.
- ♦ Unable to recruit and train new employees, but where employees are urgently required.
- ♦ Lack of management understanding of business processes.
- ♦ Poor customer service.

(ii) Step 2: Understand the rules / regulation under which enterprise needs to comply with?

One of the most important steps in automating any business process is to understand the rules of engagement, which include following the rules, adhering to regulations and following document retention requirements. This governance is established by a combination of internal corporate policies, external industry regulations and local, state, and central laws. Regardless of the source, it is important to be aware of their existence and how they affect the documents that drive the processes. It is important to understand that laws may require documents to be retained for specified number of years and in a specified format. Entity needs to ensure that any BPA adheres to the requirements of law.

(iii) Step 3: Document the process, we wish to automate

At this step, all the documents that are currently being used need to be documented. The following aspects need to be kept in mind while documenting the present process:

- What documents need to be captured?
- Where do they come from?
- What format are they in: Paper, FAX, email, PDF etc.?
- Who is involved in processing of the documents?
- What is the impact of regulations on processing of these documents?
- Can there be a better way to do the same job?
- How are exceptions in the process handled?

The benefit of the above process for user and entity being that it provides clarity on the process, helps to determine the sources of inefficiency, bottlenecks, and problems and allows tore-design the process to focus on the desired result with workflow automation.

(iv) Step 4: Define the objectives/goals to be achieved by implementing BPA

Once the above steps have been completed, entity needs to determine the key objectives of the process improvement activities – SMART (Specific: Clearly defined, Measurable: Easily quantifiable in monetary terms, Attainable: Achievable through best efforts, Relevant: Entity must be in need of these, and Timely: Achieved within a given time frame.)

(v) Step 5: Engage the business process consultant

This is again a critical step to achieve BPA. To decide as to which company/ consultant to partner with, depends upon the following:

- Objectivity of consultant in understanding/evaluating entity situation.
- Does the consultant have experience with entity business process?
- Is the consultant experienced in resolving critical business issues?
- Whether the consultant is capable of recommending and implementing a combination of hardware, software and services as appropriate to meeting enterprise BPA requirements?

- Does the consultant have the required expertise to clearly articulate the business value of every aspect of the proposed solution?

(vi) Step 6: Calculate the Return on Investment (RoI) for project

The right stakeholders need to be engaged and involved to ensure that the benefits of BPA are clearly communicated and implementation becomes successful. Hence, the required business process owners have to be convinced so as to justify the benefits of BPA and get approval from senior management. Some of the methods for justification of a BPA proposal may include cost savings in terms of eliminating fines to be paid by entity due to delays, cost of audits and lawsuits and reduced cost of space regained from paper, file cabinets; reduction in required manpower leading to no new recruits; ensuring complete documentation for all new accounts; taking advantage of early payment discounts and eliminating duplicate payments; ensuring complete documentation for all new discounts; ensuring complete documentation for all new accounts; building business by providing superior levels of customer service and charging for instant access to records etc.

(vii) Step 7: Developing the BPA

Once the requirements have been document, ROI has been computed and top management approval to go ahead has been received, the consultant develops the requisite BPA. The developed BPA needs to meet the objectives for which the same is being developed.

(viii) Step 8: Testing the BPA

Once developed, it is important to test the new process to determine how well it works and identify where additional "exception processing" steps need to be included. The process of testing is an iterative process, the objective being to remove all problems during this phase.

Testing allows room for improvements prior to the official launch of the new process, increases user adoption and decreases resistance to change. Documenting the final version of the process will help to capture all of this hard work, thinking and experience which can be used to train new people.

10. Information System Life Cycle: This is commonly referred as Software/System Development Life Cycle (SDLC) which is a methodology used to describe the process of building information systems. It is the logical starting point in the entire life cycle of a computerized system. SDLC framework provides a sequence of activities for system designers and developers to follow. It consists of a set of steps or phases in which each phase of the SDLC uses the results of the previous one. This serves as a guideline to the designer, who seeks to use it as template while working on a project development.

An SDLC adheres to important phases that are essential for developers, such as Investigation, Analysis, Design, Implementation and Maintenance and Review; and are given as follows:

Phase 1: System Investigation

This phase examines that 'What is the problem and is it worth solving'? We would be doing a feasibility study under the following dimensions:

- **Technical feasibility:** Does the technology exist to implement the proposed system or is it a practical proposition?
- **Economic feasibility:** Is proposed system cost-effective: if benefits do not outweigh costs, it's not worth going ahead?
- **Legal feasibility:** Is there any conflict between the proposed system and legal requirements?
- **Operational feasibility:** Are the current work practices and procedures adequate to support the new system?
- **Schedule feasibility:** How long will the system take to develop, or can it be done in a desired time-frame?

Phase 2: System Analysis

This phase examines that 'What must the Information System do to solve the problem'? System analyst would be gathering details about the current system and will involve:

- **Interviewing staff:** at different levels from end-users to senior management;
- **Examine current business:** systems documents and output including current order documents, computer system procedures and reports used by operations and senior management;
- **Sending out questionnaires:** that have to be carefully constructed to elicit unambiguous answers; and
- **Observation of current procedures:** by spending time in various departments. A time and motion study can show where procedures could be more efficient or to detect bottlenecks.

The Systems Analyst will examine data and information flows in the enterprise using data flow diagrams; establish what the proposed system will actually do (not how it will do it); analyze costs and benefits; outline system implementation options. (e.g. in-house or using consultants); consider possible hardware configurations; and make recommendations.

Phase 3: System Designing

This phase examines that 'How will the Information System do what it must do to obtain the solution to the problem'? This phase specifies the technical aspects of a proposed system in terms of:

- **Hardware platform:** Computer, network capabilities, input, storage and output devices;

- Software: Programming language, package and database;
- Outputs: Report layouts and screen designs;
- Inputs: Documents, screen layouts and validation procedures;
- User interface: How users will interact with the computer system;
- Modular design: Of each program in the application;
- Test plan: Develop test data;
- Conversion plan: How the new system is to be implemented; and
- Documentation: Including systems and operations documentation. Later, a user manual will be produced.

Phase 4: System Implementation

This phase examines that 'How will the Solution be put into effect'? This phase involves the following steps:

- Coding and testing of the system;
- Acquisition of hardware and software; and
- Either installation of the new system or conversion of the old system to the new one.

In Installation, there are following major activities:

- Installing the new hardware, which may involve extensive re-cabling and changes in office layouts;
- Training the users on the new system; and
- Conversion of master files to the new system or creation of new master files.

In Conversion, there are following major activities:

- Direct Changeover: The user stops using the old system one particular day and starts using the new system from thereon, usually over a weekend or during a slack period.
- Parallel Conversion: The old system continues alongside the new system for a few weeks or months.
- Phased Conversion: Used with larger systems that can be broken down into individual modules which can be implemented separately at different times.
- Pilot Conversion: New system will first be used by only a portion of the enterprise, for example at one branch or factory.

Phase 5: System Maintenance and Review

This phase evaluates results of solution and modifies the system to meet the changing needs. Post implementation review would be done to address programming amendments, adjustment of clerical procedures, modification of Reports, and request for new programs.

System maintenance could be with following different objectives:

- **Perfective Maintenance:** This implies that while the system runs satisfactorily, there is still room for improvement.
- **Adaptive Maintenance:** All systems will need to adapt to changing needs within a company.
- **Corrective Maintenance:** Problems frequently surface after a system has been in use for a short time, however thoroughly it was tested. Any errors must be corrected.

This is often the longest of the stages since it is an on-going process having some sort of long term continuum.

11. **Database Management System:** Database Management System are software that aid in organizing, controlling and using the data needed by the application programme. They provide the facility to create and maintain a well-organized database. Applications access the DBMS, which then accesses the data.

    In other words, DBMS may be defined as a computerized record keeping. Database is just an electronic filing cabinet i.e., a collection of computerized data files that helps us to do various operations on the files, such as adding new files to database, deleting existing files from database, inserting data in existing files, modifying data in existing files, deleting data in existing files, and retrieving or querying data from existing files. Oracle, My SQL, SQL Servers and DB2 are some of the commercially available Data Base Management Systems.

    Advantages of a DBMS

    Major advantages of DBMS are given as follows:

    - **Permitting data sharing:** One of the principle advantages of a DBMS is that the same information can be made available to different users.
    - **Minimizing Data Redundancy:** In DBMS, duplication of information or redundancy, if not eliminated, is carefully controlled or reduced i.e. there is no need to repeat the same data over and over again. Minimizing redundancy can therefore significantly reduce the cost of storing information on hard drives and other storage devices
    - **Integrity can be maintained:** Data integrity is maintained by having accurate, consistent, and up-to-date data. Updates and changes to the data only have to be made in one place in DBMS ensuring Integrity. The chances of making a mistake increase if the same data needs to be changed at several different places than making the change in one place.

- **Program and file consistency:** Using a DBMS, file formats and programs are standardized. This makes the data files easier to maintain because the same rules and guidelines apply across all types of data. The level of consistency across files and programs also makes it easier to manage data when multiple programmers are involved.
- **User-friendly:** DBMS makes the data access and manipulation easier for the user. DBMS also reduce the reliance of users on computer experts to meet their data needs.
- **Improved security:** DBMSs allow multiple users to access the same data resources which could lead to risk to an enterprise if not controlled. Security constraints can be defined i.e. Rules can be built to give access to sensitive data. Some sources of information should be protected or secured and only viewed by select individuals. Through the use of passwords, database management systems can be used to restrict data access to only those who should see it.
- **Achieving program/data independence***:* In a DBMS data does not reside in applications but data bases program & data are independent of each other.
- **Faster application development:** In the case of deployment of DBMS, application development becomes fast. The data is already therein databases, application developer has to think of only the logic required to retrieve the data in the way a user needs.

Disadvantages of a DBMS

There are basically two major downsides to using DBMSs. One of these is cost (both system and user training), and the other is the threat to data security. These are given as under:

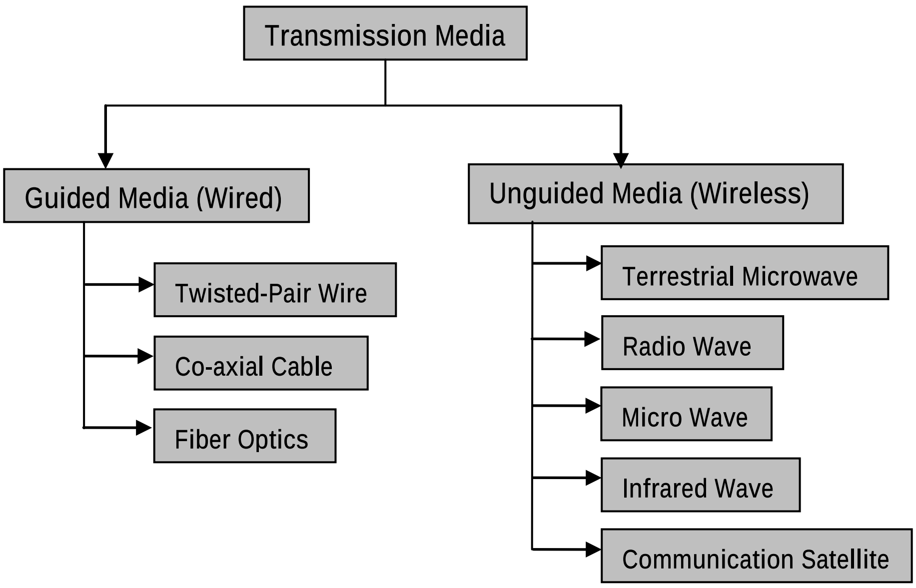
- **Cost:** Implementing a DBMS system can be expensive and time-consuming, especially in large enterprises. Training requirements alone can be quite costly.
- **Security:** Even with safeguards in place, it may be possible for some unauthorized users to access the database. If one gets access to database then it could be an all or nothing proposition.

12. Transmission Media connects the message source with the message receiver by means of Guided or Unguided Media.

    Guided Media/Bound Media: Guided Transmission Media uses a "cabling" system that guides the data signals along a specific path. Some of the common examples of guided media are Twisted Pair, Coaxial cable and Fibre optics.

    - **Twisted-Pair Wire:** Twisted-pair is ordinary telephone wire, consisting of copper wire twisted into pairs. It is the most widely used media for telecommunications and is used for both voice and data transmissions. It is used extensively in home and office telephone systems and many LANs and WANs.

- Coaxial Cable: This telecommunication media consists of copper or aluminium wire wrapped with spacers to insulate and protect it. Coaxial cables can carry a large volume of data and allows high-speed data transmission used in high-service metropolitan areas for cable TV systems, and for short-distance connection of computers and peripheral devices. It is used extensively in office buildings and other work sites for local area networks.
- Fibre Optics: This media consists of one or more hair-thin filaments of glass fibre wrapped in a protective jacket. Signals are converted to light form and fired by laser in bursts. Optical fibres can carry digital as well as analog signals and provides increased speed and greater carrying capacity than coaxial cable and twisted-pair lines.



Unguided Media/Unbound Media: Unguided Transmission Media consists of a means for the data signals to travel but nothing to guide them along a specific path. The data signals are not bound to a cabling media. Some of the common examples of unguided media are Terrestrial Microwave, Radio Waves, Micro Waves, Infrared Waves and Communication Satellites.

- Terrestrial Microwave: Terrestrial microwave media uses the atmosphere as the medium through which to transmit signals and is used extensively for high-volume as well as long-distance communication of both data and voice in the form of electromagnetic waves.
- Radio Waves: Radio waves are an invisible form of electromagnetic radiation that varies in wavelength from around a millimeter to 100,000 km, making it one of the

widest ranges in the electromagnetic spectrum. Radio waves are most commonly used transmission media in the wireless Local Area Networks.

- **Micro Waves:** Microwaves are radio waves with wavelengths ranging from as long as one meter to as short as one millimeter, or equivalently, with frequencies between 300 MHz (0.3 GHz) and 300 GHz. These are used for communication, radar systems, radio astronomy, navigation and spectroscopy.
- **Infrared Waves:** Infrared light is used in industrial, scientific, and medical applications. Night-vision devices using infrared illumination allow people or animals to be observed without the observer being detected.
- **Communication Satellites:** Communication satellites use the atmosphere (microwave radio waves) as the medium through which to transmit signals. A satellite is some solar-powered electronic device that receives, amplifies, and retransmits signals; the satellite acts as a relay station between satellite transmissions stations on the ground (earth stations). They are used extensively for high-volume as well as long-distance communication of both data and voice.

13. **Threat:** A Threat is anything that can disrupt the operation, functioning, integrity, or availability of a network or system. Network security threats can be categorized into four broad themes:

- **Unstructured Threats -** These originate mostly from inexperienced individuals using easily available hacking tools from the Internet. Many tools available to anyone on the Internet can be used to discover weaknesses in a company's network. These include port-scanning tools, address-sweeping tools, and many others. Most of these kinds of probes are done more out of curiosity than with a malicious intent in mind.

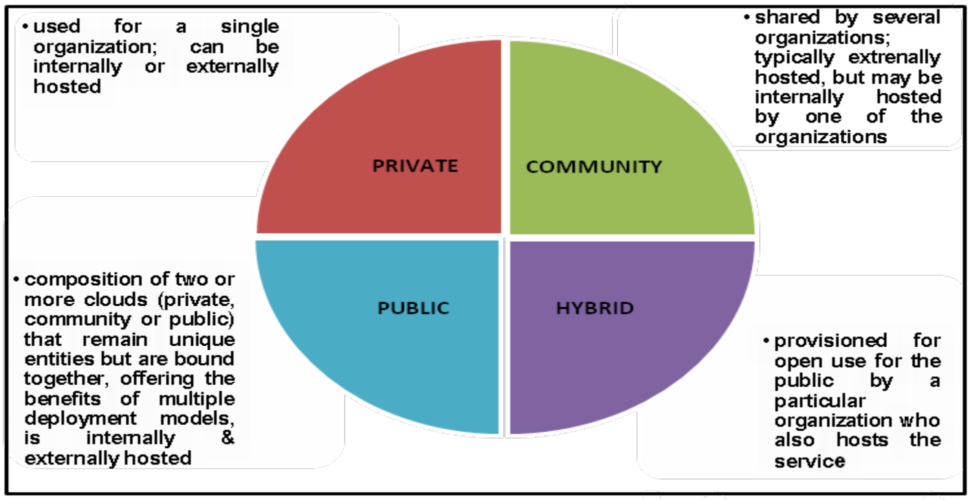
  For example, if a company's external web site is hacked; the company's integrity is damaged. Even if the external web site is separate from the internal information that sits behind a protective firewall, the public does not know that. All they know is that if the company's web site is hacked, then it is an unsafe place to conduct business.
- **Structured Threats -** These originate from individuals who are highly motivated and technically competent and usually understand network systems design and the vulnerabilities of those systems. They can understand as well as create hacking scripts to penetrate those network systems. An individual who presents a structured threat typically targets a specific destination or group. Usually, these hackers are hired by industry competitors, or state-sponsored intelligence organizations.
- **External Threats -** These originate from individuals or organizations working outside an organization, which does not have authorized access to organization's computer systems or network. They usually work their way into a network from the Internet or dialup access servers.

♦ Internal Threats - Typically, these threats originate from individuals who have authorized access to the network. These users either have an account on a server or physical access to the network. An internal threat may come from a discontented former or current employee or contractor. Majority of security incidents originate from internal threats.

14. Cloud Computing: Cloud computing is the use of various services, such as software development platforms, servers, storage, and software, over the Internet, often referred to as the "Cloud."

Cloud Computing Environment

The Cloud Computing environment can consist of multiple types of clouds based on their deployment and usage as shown in the Figure and explained as follows:



- Public Cloud: The public cloud is made available to the general public or a large industry group. They are administrated by third parties or vendors over the Internet, and services are offered on pay-per-use basis. The key benefits are as follows:

  (a) It is widely used in the development, deployment and management of enterprise applications, at affordable costs;

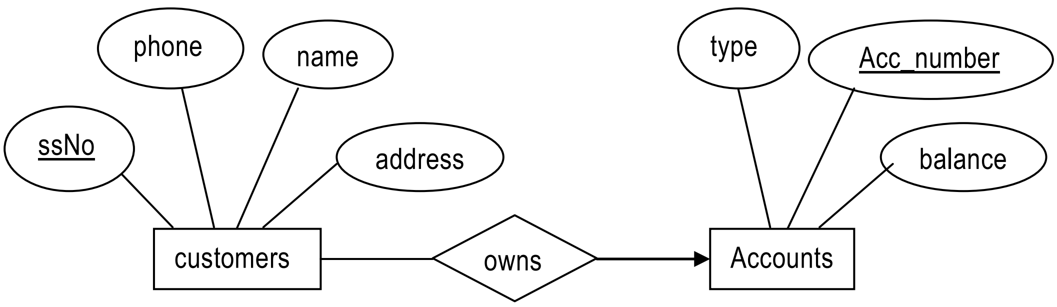
  (b) It allows organizations to deliver highly scalable and reliable applications rapidly and at more affordable costs.

- Private Cloud: Also referred as Internal Cloud, this cloud computing environment resides within the boundaries of an organization and is used exclusively for the organization's benefits. They are built primarily by IT departments within enterprises who seek to optimize utilization of infrastructure resources within the enterprise by provisioning the infrastructure with applications using the concepts of grid and virtualization. The benefit of a Private Cloud is that it enables an enterprise to manage the infrastructure and have more control, but this comes at the cost of IT department creating a secure and scalable cloud.

- **Community Cloud:** This is the sharing of computing infrastructure in between organizations of the same community. For example, all Government organizations within India may share computing infrastructure on the cloud to manage data. The risk is that data may be stored with the data of competitors.
- **Hybrid Cloud:** It is maintained by both internal and external providers. It is a composition of two or more clouds (Private, Community or Public). They have to maintain their unique identity, but are bound together by standardized data and application portability. With a hybrid cloud, organizations might run non-core applications in a public cloud, while maintaining core applications and sensitive data in-house in a private cloud.

15. (a) The E-R Diagram is as follows:

The underlined attributes represent the Primary Key which are unique and are used for identification of a record.



(b) To check for the completeness of the decision table, do the following:

- Count the number of dashes in the condition entries for each rule. The number of rules represented by each rule is 2^m, where m is the number of dashes. Where there are no dashes, the number represented is $2^0 = 1$. A single dash means $2^1 = 2$ and so on.
- Sum the number of dashes represented by the different rules as computed above.
- Compare the number of rules (no of dashes) represented by the reduced table with 2^n (where n is the number of conditions). If they are equal (and all other features are correct), the table is complete.

Now, Sum of the number of dashes in rows R1, R2, R3, R4 and R5 are

= $2^2 + 2^1 + 2^2 + 2^0 + 2^0$

= 4 + 2 + 4 + 1 + 1

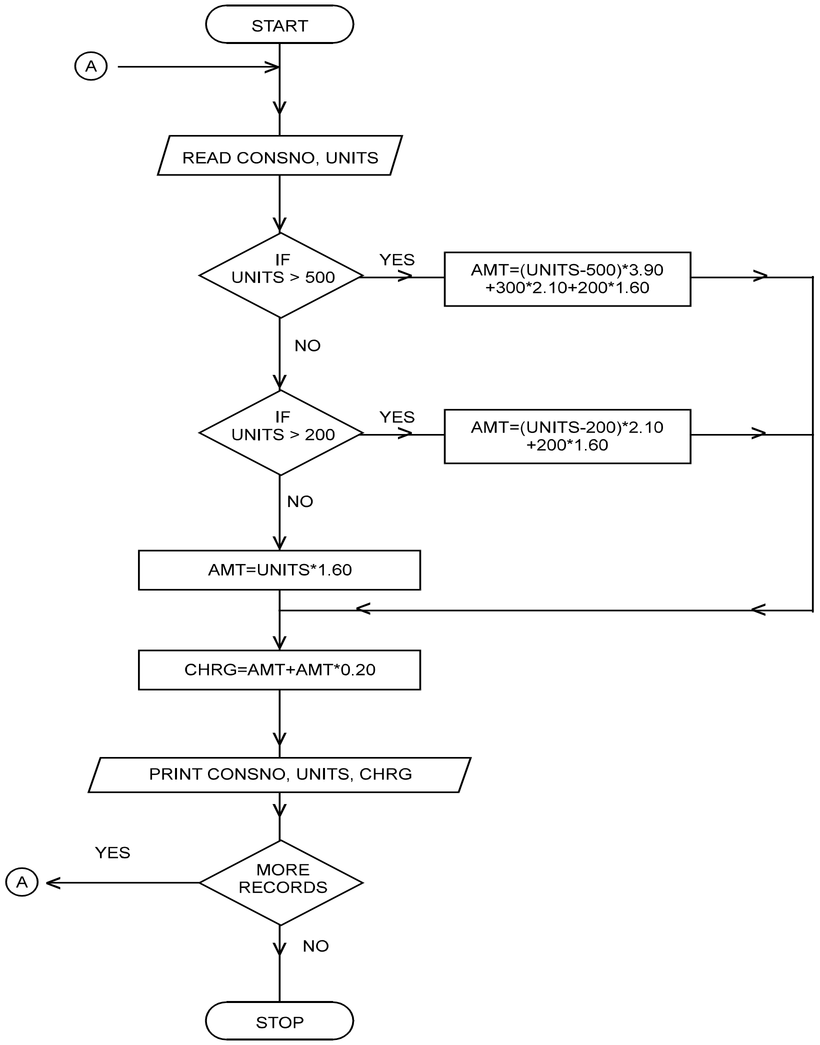
= 12 ----------------------------------(i)

Also, $2^{\text{number of conditions}} = 2^n = 2^4$ (where conditions are C1, C2, C3, C4)

= 16 ----------------------------------(ii)

Since (i) and (i) are not equal, thus the table is not complete.

(c) The required flow chart is given below:



CONSNO - Consumer Number UNITS - Number of Units consumed

CHRG - Total charges AMT - Total amount

SECTION – B: STRATEGIC MANAGEMENT

QUESTIONS

Correct/Incorrect with reasoning

1. State with reasons which of the following statements are correct/incorrect:
   - (a) Diversity in environment makes it difficult to understand.
   - (b) An organization with intense competition is unlucky.
   - (c) The technology and business are highly interrelated and interdependent.
   - (d) A sound strategy does not leave any scope for miscalculations.
   - (e) The strategic management process ends with implementation.
   - (f) Strategy formulation heavily relies on intuition and hunch.
   - (g) One or two key success factors may outrank others.
   - (h) Strategic planning always flows from top to bottom.
   - (i) Stability strategies are do-nothing approach to manage.
   - (j) Cost-plus pricing ensures profits in competition.
   - (k) Network structure creates virtual organisations.
   - (l) Unfreezing facilitates change.

Differences between the two concepts

2. Distinguish between the following:
   - (a) Micro environment and Macro environment.
   - (b) Forward integration and backward integration
   - (c) Inbound logistics and outbound logistics
   - (d) Concentric diversification and conglomerate diversification.

Short notes

3. Write short notes on the following:
   - (a) Globalisation
   - (b) strategic vision
   - (c) Transformational leadership
   - (d) Kieretsus
   - (e) Hourglass Structure

Brief answers

4. Briefly answer the following questions:
   - (a) What is a mission statement?
   - (b) How production strategy implements, supports and drives higher strategies?
   - (c) What do you understand by the term star in the context of BCG matrix?
   - (d) What are the major dimensions of strategic decisions?
   - (e) Benchmarking process helps to achieve improvement in diverse range of management functions. Discuss.

Descriptive Answers

Chapter 1-Business Environment

5. What is Environment? Briefly explain various macro environmental factors in Indian context.
6. What do you understand by the term business? Are business done for profit alone. Explain various objectives of business.

Chapter 2-Business Policy and Strategic Management

7. What do you understand by the term corporate strategy? Explain the concept with its characteristics. How would you argue that 'corporate strategy 'ensures the correct alignment of the firm with its environment'?
8. What do you understand by ‘Strategy’? Explain the four generic strategies as discussed by Glueck and Jauch.

Chapter 3-Strategic Analysis

9. What is TOWS Matrix. How is it improvement over the SWOT Analysis? Describe the construction of TOWS Matrix.
10. Explain GE model. How is it useful in making strategic choices?

Chapter 4-Strategic Planning

11. Discuss how mergers and acquisitions are used for business growth. What are the various types of mergers?
12. What is diversification? Distinguish between vertically integrated diversification and horizontally integrated diversification.

Chapter 5-Formulation of Functional Strategy

13. What are functional strategies? How important are they for the business?
14. Explain the requirements for the successful implementation of supply chain management system?

Chapter 6-Strategic Implementation and Control

15. What is strategic change? How do you initiate strategic change in an organisation? Explain the change process proposed by Kurt Lewin.

16. What are the leadership roles played by a strategic leader? Distinguish between a transformational leader and a traditional leader.

Chapter 7-Reaching Strategic Edge

17 How internet is affecting the business? Explain the strategy-shaping characteristics of the E-commerce environment.

18. How six sigma can be implemented for *existing and new products.*

SUGGESTED ANSWERS / HINTS

1. (a) Correct: The environment encapsulates many different influences; the difficulty is in making sense of this diversity in a way which can contribute to strategic decision-making. Listing all conceivable environmental influences may be possible, but it may not be of much use because no overall picture emerges of really important influences on the organization.

   (b) Incorrect: Although competition makes organizational working difficult, intense competition is neither a coincidence nor bad luck. All organizations have competition. Multinationals and large organizations clash directly on every level of product and service. Mid-sized and small businesses also chase same customers and find that prices and product quality are bounded by the moves of their competitors. The benefits of competition are also enjoyed by the society and the markets in which organisations operate.

   (c) Correct: The fruits of technological research and development are available to society through business only and this also improves the quality of life of the society. Hence, technology is patronized by business. Technology also drives business and makes a total change on how it is carried out.

   (d) Incorrect: In a sound strategy, allowances are made for possible miscalculations and unanticipated events. Strategy is no substitute for sound, alert and responsible management. Strategy can never be perfect, flawless and optimal. It is in the very nature of strategy that it is flexible and pragmatic; it is art of the possible; it does not preclude second-best choices, trade-offs, sudden emergencies, pervasive pressures, failures and frustrations.

   (e) Incorrect: Strategy formulation, implementation, and evaluation activities are performed on a continual basis, not just at the end of the year or semi-annually. The strategic management process is dynamic and continuous. It never really ends. Any significant extraneous factor can trigger a change in the process.

(f) **Incorrect:** Strategy formulation is not a task that managers can get by with intuition, opinions, good instincts, and creative thinking. Judgments about what strategies to pursue flow directly from analysis of an organisational external environment and internal situation. It is a pragmatic approach in which strategies are carefully chosen from various alternatives after thorough analysis of micro and macro environment, competition, capabilities, resources, internal strengths, weaknesses and market position.

(g) **Correct:** Key success factors vary from industry to industry and even from time to time within the same industry as driving forces and competitive conditions change. Only rarely does an industry have more than three or four key success factors at any one time. And even among these three or four, one or two usually outrank the others in importance. Managers, therefore, have to resist the temptation to include factors that have only minor importance.

(h) **Incorrect:** Although strategic planning is a top level management function, the flow of planning can be from corporate to divisional level or vice-versa. There are two approaches for strategic planning - top down or bottom up. Top down strategic planning describes a centralized approach to strategy formulation in which the corporate centre determines mission, strategic intent, objectives and strategies for the organization as a whole and for all parts. Unit managers are seen as implementers of pre-specified corporate strategies. Bottom up strategic planning is the characteristic of autonomous or semi-autonomous divisions or subsidiary companies in which the corporate centre does not conceptualize its strategic role as being directly responsible. It may prefer to act as a catalyst and facilitator.

(i) **Incorrect:** Stability strategies are implemented by approaches wherein few functional changes are made in the products or markets. However, it is not a 'do nothing' strategy. It involves keeping track of new developments to ensure that the strategy continues to make sense. This strategy is typical for mature business organizations. Some small organizations will also frequently use stability as a strategic focus to maintain comfortable market or profit position.

(j) **Incorrect:** Theoretically, organizations may adopt cost plus pricing wherein a margin is added to the cost of the product to determine its price. However, in the competitive environment such an approach may not be feasible. More and more companies of today have to accept the market price with minor deviations and work towards their costs. They reduce their cost in order to maintain their profitability.

(k) **Correct:** In a network structure many activities are outsourced. A corporation organized in this manner is often called a virtual organization because it is composed of a series of project groups or collaborations linked by constantly changing non-hierarchical, cobweb-like networks. The network structure becomes most useful when the environment of a firm is unstable and is expected to remain so. Under such conditions, there is usually a strong need for innovation and quick response. Instead of having salaried employees, it may contract with people for a specific project or length of time.

(l) **Correct:** Unfreezing makes the individuals or organizations aware of the necessity for change and prepares them for such a change. According to Kurt Lewin changes should not come as a surprise to the members of the organization. Sudden and unannounced change would be socially destructive and morale lowering. The management must pave the way for the change by first "unfreezing the situation", so that members would be willing and ready to accept the change. Unfreezing is the process of breaking down the old attitudes and behaviours, customs and traditions so that they start with a clean slate.

2. (a) The business environment consists of both the macro environment and the micro environment. Following are the differences between the two:

1. The micro environment refers to the forces that are very close to the company and affect its ability to do routine functions. Macro environment refers to all forces that are part of the larger periphery and distantly affect organization and micro environment.
2. Micro environment includes the company itself, its suppliers, marketing intermediaries, customer markets and competitors. Whereas macro environment includes demography, economy, natural forces, technology, politics, legal and socio-cultural.
3. The elements of micro environment are specific to the said business and affects it's working on short term basis. The elements of macro environment are general environment and affect the working of all the firms in an industry.

(b) Forward and backward integration forms part of vertically integrated diversification. In vertically integrated diversification, firms opt to engage in businesses that are vertically related to the existing business of the firm. While diversifying firms opt to engage in businesses that are linked forward or backward in the chain and enters specific product/process steps with the intention of making them into new businesses for the firm.

Backward integration is a step towards, creation of effective supply by entering business of input providers. Strategy employed to expand profits and gain greater control over production of a product whereby a company will purchase or build a business that will increase its own supply capability or lessen its cost of production. On the other hand forward integration is moving forward in the value chain and entering business lines that use existing products. Forward integration will also take place where organisations enter into businesses of distribution channels.

(c) Inbound logistics are the activities concerned with receiving, storing and distributing the inputs to the product/service. It includes all activities such as materials handling, stock control, transport etc.

Outbound logistics relate to collection, storage and distribution of the product to customers. It includes all activities such as storage/warehousing of finished goods, order processing, scheduling deliveries, operation of delivery vehicles, etc.

(d) Concentric diversification occurs when a firm adds related products or markets. On the other hand conglomerate diversification occurs when a firm diversifies into areas that are unrelated to its current line of business.

In concentric diversification, the new business is linked to the existing businesses through process, technology or marketing. In conglomerate diversification, no such linkages exist; the new business/product is disjointed from the existing businesses/products.

The most common reasons for pursuing a concentric diversification are that opportunities in a firm’s existing line of business are available. However, common reasons for pursuing a conglomerate growth strategy is that opportunities in a firm's current line of business are limited or opportunities outside are highly lucrative.

3. (a) In simple economic terms, globalization refers to the process of integration of the world into one huge market. At the company level, globalization means two things: (a) the company commits itself heavily with several manufacturing locations around the world and offers products in several diversified industries, and (b) it also means ability to compete in domestic markets with foreign competitors.

(b) A strategic vision delineates organisation’s aspirations for the business, providing a panoramic view of the position where the organisation is going. A strategic vision points an organization in a particular direction, charts a strategic path for it to follow in preparing for the future, and moulds organizational identity. A Strategic vision is a roadmap of a company’s future – providing specifics about technology and customer focus, the geographic and product markets to be pursued, the capabilities it plans to develop, and the kind of company that management is trying to create.

(c) Transformational leadership style use charisma and enthusiasm to inspire people to exert them for the good of the organization. Transformational leadership style may be appropriate in turbulent environments, in industries at the very start or end of their life-cycles, in poorly performing organizations when there is a need to inspire a company to embrace major changes. Transformational leaders offer excitement, vision, intellectual stimulation and personal satisfaction. They inspire involvement in a mission, giving followers a ‘dream’ or ‘vision’ of a higher calling so as to elicit more dramatic changes in organizational performance. Such a leadership motivates followers to do more than originally affected to do by stretching their abilities and increasing their self-confidence, and also promote innovation throughout the organization.

(d) Kieretsus is a loosely-coupled group of companies, usually in related industries. It is a Japanese term which is used for large cooperative networks of businesses. Kieretsus members are peers and may own significant amounts of each other's stock and have many board members in common.

(e) In the recent years information technology and communications have significantly altered the functioning of organizations. The role played by middle management is diminishing as the tasks performed by them are increasingly being replaced by the technological tools. Hourglass organization structure consists of three layers with constricted middle layer. The structure has a short and narrow middle-management level. Information technology links the top and bottom levels in the organization taking away many tasks that are performed by the middle level managers. A shrunken middle layer coordinates diverse lower level activities. Contrary to traditional middle level managers who are often specialist, the managers in the hourglass structure are generalists and perform wide variety of tasks. They would be handling cross-functional issues emanating such as those from marketing, finance or production.

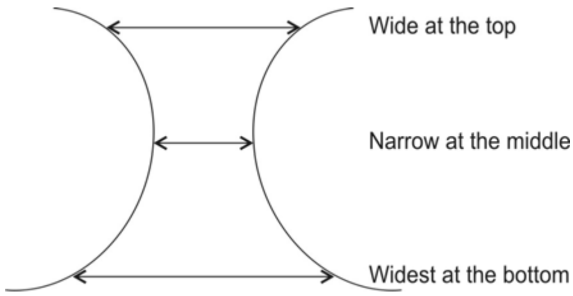


Figure: Hourglass Organisation Structure

Hourglass structure has obvious benefit of reduced costs. It also helps in enhancing responsiveness by simplifying decision making. Decision making authority is shifted close to the source of information so that it is faster. However, with the reduced size of middle management the promotion opportunities for the lower levels diminish significantly. Continuity at same level may bring monotony and lack of interest and it becomes difficult to keep the motivation levels high. Organisations try to overcome these problems by assigning challenging tasks, transferring laterally and having a system of proper rewards for performance.

4. (a) Mission statement is an answer to the question “Who we are and what we do” and hence has to focus on the organisation’s present capabilities, focus activities and business makeup. An organisation’s mission states what customers it serves, what need it satisfies, and what type of product it offers. It is an expression of the growth ambition of the organisation.

(b) For effective implementation of higher level strategies, strategists need to provide direction to functional managers, including production, regarding the plans and policies to be adopted. Production strategy provides a path for transmitting corporate and business level strategy to the production systems and makes it operational. It may relate to production planning, operational system, control and research & development.

(c) Star in BCG Matrix: BCG growth-share matrix is a simple way to portray an organisation's portfolio of investments. Growth share matrix also known for its cow and dog metaphors is popularly used for resource allocation in a diversified company. The matrix is based on combinations of relative market share of the products or SBUs and their market growth rate.

Stars, a position in the matrix, are characterised by high market share and high growth rate. They are products or SBUs that are growing rapidly. They also need heavy investment to maintain their position and finance their rapid growth potential. Business organisations that enjoy star positions have best opportunities for expansion and growth.

(d) The major dimensions of strategic decisions are given below:

1. *Strategic issues require top-management decisions*: Strategic issues involve thinking in totality of the organizations and also there is lot of risk involved and hence required to be considered by the top management.

2. *Strategic issues involve the allocation of large amounts of company resources*: They may require huge financial investment to venture into a new area of business or the organization may require huge number of manpower with new set of skills in them.

3. *Strategic issues are likely to have a significant impact on the long term prosperity of the firm*: Generally the results of strategic implementation are seen on a long term basis and not immediately.

4. *Strategic issues are future oriented*: Strategic thinking involves predicting the future environmental conditions and how to orient for the changed conditions.

5. *Strategic issues usually have major multifunctional or multi-business consequences*: As they involve organization in totality they affect different sections of the organization with varying degree.

6. *Strategic issues necessitate consideration of factors in the firm's external environment*: Strategic focus in organization involves orienting its internal environment to the changes of external environment.

(e) Benchmarking is a process of finding the best practices within and outside the industry to which an organisation belongs. Knowledge of the best practices helps in setting standards and finding ways to match or even surpass own performances with the best performances.

Benchmarking is a process of continuous improvement in search for competitive advantage. Firms can use benchmarking process to achieve improvement in diverse range of management function such as mentioned below:

1. maintenance operations,
2. assessment of total manufacturing costs,
3. product development,
4. product distribution,
5. customer services,
6. plant utilisation levels; and
7. human resource management.

5. Environment is sum of several external and internal forces that affect the functioning of business. Businesses function as a part of broader environment. The inputs in the form of human, physical, financial and other related resources are drawn from the environment. The business converts these resources through various processes into outputs of products and/or services. The latter are exchanged with the external client groups, say customers. The extent to which the business thrives depends on the manner in which it interacts with its environment. Macro environment is explained as one which is largely external to the enterprise and thus beyond the direct influence and control of the organization, but which exerts powerful influence over its functioning. Important elements of macro environment are:

   1. Demographic environment.
   2. Economic environment.
   3. Political-Legal Environment.
   4. Socio-Cultural environment.
   5. Technological environment.
   6. Global environment.

   Students may briefly explain the above giving Indian examples. In demographic they may highlight that India constitutes about 16% of world population. Indian population is fairly young. There is great diversity. Labour is cheap and so on. The economic problems being faced presently and about 5% growth may be covered in economic environment. In political-legal students may touch upon new Companies Act, new Government, etc. The diversity in socio-cultural including dialects, differing traditions etc. can be mentioned in socio-cultural environment. India's promptness in accepting new technology, flow of business across the border including flow of knowledge and business processes may be covered in technological environment. The global environment may include encouragement to foreign investors and exports. It may also cover our dependence on crude and how its prices are affecting India. A lot of changes are occurring within India and across the globe affecting the business. Students should list out different elements of macro environment and discuss the contemporary developments in each of the area. They may develop their own answers to cover different elements of environment.

6. The term business is wide and amenable to different usages. A business for our purposes can be any activity consisting of purchase, sale, manufacture, processing, and/or marketing of products and/or services. It is said that a business exists for profits. Profit, as a surplus of business, accrues to the owners. It is their share, just as wages are the share of workers. People invest in business for getting return. For business enterprises, profit is often regarded as the overall measure of performance. Business efficiency is often expressed in terms of percentage of profit to sales volume, to capital employed, to market value of corporate shares and so on. Outside investors also equate profit with the degree of business efficiency and managerial competence and commit their funds in light of such equation and other related assessments.

   Peter F Drucker has drawn two important conclusions about what is a business that are useful for an understanding of the term business. The first thing about a business is that it is created and managed by people. There will be a group of people who will take decisions that will determine whether an organization is going to prosper or decline, whether it will survive or will eventually perish. This is true of every business. The second conclusion drawn is that the business cannot be explained in terms of profit.

   The economic criterion of maximising profits for a firm has little relevance in the present times. Profit maximization, in simple terms is selling at a higher price than the cost. Profit maximization has been qualified with the long-term perspective and has been modified to include development of wealth, to include several non-financial factors such as goodwill, societal factors, relations and so on.

   A business has some purpose. A valid purpose of business is to create customers. It is for the businesses to create a customer or market. It is the customer who determines what a business is. The customer is the foundation of business and keeps it in existence. Organisations seek to balance the objectives in an appropriate manner. Some of the objectives of business are:

   1. Survival
   2. Stability
   3. Growth
   4. Efficiency
   5. Profitability

7. The term strategy is associated with unified design and action for achieving major goals, gaining command over the situation with a long-range perspective and securing a

critically advantageous position. Strategies are formulated at the corporate, divisional and functional level. Corporate strategies are formulated by the top managers. They include the determination of the business lines, expansion and growth, vertical and horizontal integration, diversification, takeovers and mergers, new investment and divestment areas, R & D projects, and so on. These corporate wide strategies need to be operationalized by divisional and functional strategies regarding product lines, production volumes, quality ranges, prices, product promotion, market penetration, purchasing sources, personnel development and like.

In general, a corporate strategy has the following characteristics:

- It is generally long-range in nature, though it is valid for short-range situations also and has short-range implications.
- It is action oriented and is more specific than objectives.
- It is multi-pronged and integrated.
- It is flexible and dynamic.
- It is formulated at the top management level, though middle and lower level managers are associated in their formulation and in designing sub-strategies.
- It is generally meant to cope with a competitive and complex setting.
- It flows out of the goals and objectives of the enterprise and is meant to translate them into realities.
- It is concerned with perceiving opportunities and threats and seizing initiatives to cope with them. It is also concerned with deployment of limited organizational resources in the best possible manner.
- It gives importance to combination, sequence, timing, direction and depth of various moves and action initiatives taken by managers to handle environmental uncertainties and complexities.
- It provides unified criteria for managers in function of decision making.

Corporate strategy in the first place ensures the growth of the firm and its correct alignment with the environment. Corporate strategies are concerned with the broad and long-term questions of what businesses the organization is in or wants to be in, and what it wants to do with those businesses. They set the overall direction the organization will follow. It serves as the design for filling the strategic planning gap. It also helps to build the relevant competitive advantages. A right fit between the firm and its external environment is the primary contribution of corporate strategy. Basically the purpose of corporate strategy is to harness the opportunities available in the environment and countering the threats embedded therein. With the help of corporate strategy, organizations match their unique capabilities with the external environment so as to achieve its vision and mission.

8. Strategies provide an integral framework for management and negotiate their way through a complex and turbulent external environment. Strategy seeks to relate the goals of the organisation to the means of achieving them.

   Strategy may be defined as a long range blueprint of an organisation's desired image, direction and destination what it wants to be, what it wants to do and where it wants to go. Strategy is meant to fill in the need of organisations for a sense of dynamic direction, focus and cohesiveness.

   The Generic Strategies

   According to Glueck and Jauch there are four generic ways in which strategic alternatives can be considered. These are stability, expansion, retrenchment and combinations.

   (i) Stability strategies: One of the important goals of a business enterprise is stability to safeguard its existing interests and strengths, to pursue well established and tested objectives, to continue in the chosen business path, to maintain operational efficiency on a sustained basis, to consolidate the commanding position already reached, and to optimise returns on the resources committed in the business.

   (ii) Expansion Strategy: Expansion strategy is implemented by redefining the business by adding the scope of business substantially increasing the efforts of the current business. Expansion is a promising and popular strategy that tends to be equated with dynamism, vigor, promise and success. Expansion includes diversifying, acquiring and merging businesses.

   (iii) Retrenchment Strategy: A business organisation can redefine its business by divesting a major product line or market. Retrenchment or retreat becomes necessary for coping with particularly hostile and adverse situations in the environment and when any other strategy is likely to be suicidal. In business parlance also, retreat is not always a bad proposition to save the enterprise's vital interests, or even to regroup and recoup the resources before a fresh assault and ascent on the growth ladder is launched.

   (iv) Combination Strategies: Stability, expansion or retrenchment strategies are not mutually exclusive. It is possible to adopt a mix to suit particular situations. An enterprise may seek stability in some areas of activity, expansion in some and retrenchment in the others. Retrenchment of ailing products followed by stability and capped by expansion in some situations may be thought of. For some organisations, a strategy by diversification and/or acquisition may call for a retrenchment in some obsolete product lines, production facilities and plant locations.

9. Heinz Weihrich has developed a matrix called TOWS matrix by comparing strengths and weaknesses of organization with that of market opportunities and threats, a variant of SWOT. It has been criticized that after conducting the SWOT Analysis managers frequently fail to come to terms with the strategic choices that the outcomes demand. In

order to overcome this, Through SWOT analysis organisations identify their strengths, weaknesses, opportunities and threats. While conducting the SWOT Analysis managers are often not able to come to terms with the strategic choices that the outcomes demand. The incremental benefit of the TOWS matrix lies in systematically identifying relationships between these factors and selecting strategies on their basis. The matrix is outlined below:

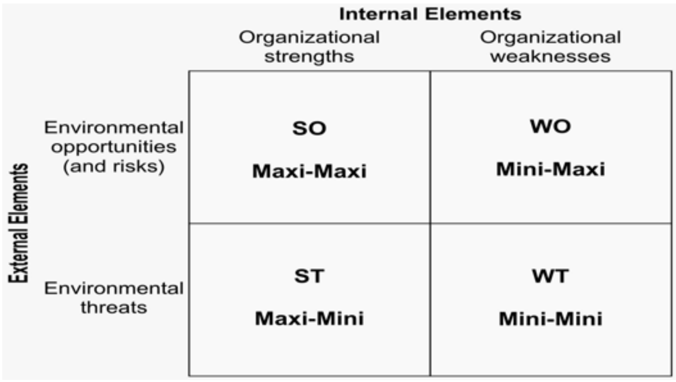


Figure : The TOWS Matrix (Source: Weihrich, H)

The TOWS Matrix is a relatively simple tool for generating strategic options. Through TOWS matrix four distinct alternative kinds of strategic choices can be identified.

SO (Maxi-Maxi): SO is a position that any firm would like to achieve. The strengths can be used to capitalize or build upon existing or emerging opportunities.

ST (Maxi-Mini): ST is a position in which a firm strives to minimize existing or emerging threats through its strengths.

WO (Mini-Maxi): The strategies developed need to overcome organizational weaknesses if existing or emerging opportunities are to be exploited to maximum.

WT (Mini-Mini): WT is a position that any firm will not like to be. An organization facing external threats and internal weaknesses may have to struggle for its survival.

10. The model has been used by General Electric Company (developed by GE with the assistance of the consulting firm McKinsey & Company) known as “Stop-Light” Strategy Model. This model is also known as Business Planning Matrix, GE Nine-Cell Matrix and GE Model. The strategic planning approach in this model has been inspired from traffic control lights. The lights that are used at crossings to manage traffic are: green for go, amber or yellow for caution, and red for stop. This model uses two factors while taking strategic decisions: Business Strength and Market Attractiveness. The vertical axis indicates market attractiveness and the horizontal axis shows the business strength in the industry. The market attractiveness is measured by a number of factors like:

    1. Size of the market.

2. Market growth rate.
3. Industry profitability.
4. Competitive intensity.
5. Availability of Technology.
6. Pricing trends.
7. Overall risk of returns in the industry.
8. Opportunity for differentiation of products and services.
9. Demand variability.
10. Segmentation.
11. Distribution structure (e.g. retail, direct, wholesale) etc.

Business strength is measured by considering the typical drivers like:

1. Market share.
2. Market share growth rate.
3. Profit margin.
4. Distribution efficiency.
5. Brand image.
6. Ability to compete on price and quality.
7. Customer loyalty.
8. Production capacity.
9. Technological capability.
10. Relative cost position.
11. Management caliber, etc.

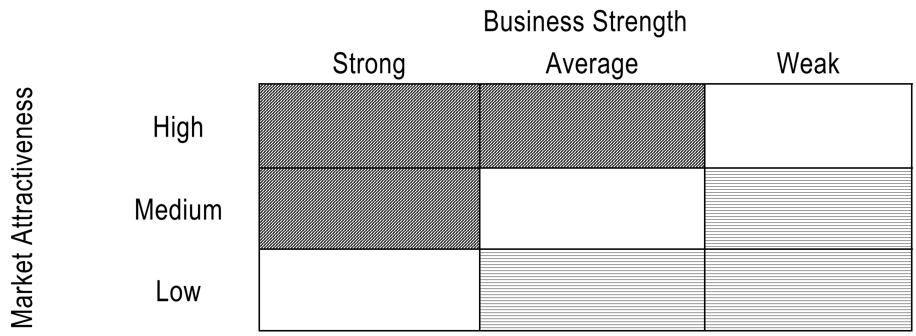


Figure : The GE Portfolio Matrix

Zone	Strategic Signals
Green	Invest/Expand
Yellow	Select/Earn
Red	Harvest/Divest

If a product falls in the green section, the business is at advantageous position. To reap the benefits, the strategic decision can be to expand, to invest and grow. If a product is in the amber or yellow zone, it needs caution and managerial discretion is called for making the strategic choices. If a product is in the red zone, it will eventually lead to losses that would make things difficult for organisations. In such cases, the appropriate strategy should be retrenchment, divestment or liquidation.

11. Many organizations in order to achieve quick growth, expand or diversify use strategies such as mergers and acquisitions. This also helps in deploying surplus funds.

Merger and acquisition in simple words are defined as a process of combining two or more organizations together. There is a thin line of difference between the two terms but the impact of combination is completely different in both the cases.

Some organizations prefer to grow through mergers. Merger is considered to be a process when two or more organizations join together to expand their business operations. In such a case the deal gets finalized on friendly terms. Owners of pre-merged entities have right over the profits of new entity. In a merger two organizations combine to increase their strength and financial gains.

When one organization takes over the other organization and controls all its business operations, it is known as acquisition. In the process of acquisition, one financially strong organization overpowers the weaker one. Acquisitions often happen during recession in economy or during declining profit margins. In this process, one that is financially stronger and bigger establishes it power. The combined operations then run under the name of the powerful entity. A deal in case of an acquisition is often done in an unfriendly manner, it is more or less a forced association where the powerful organization takes over a weaker entity.

Types of Mergers

1. Horizontal merger: Horizontal mergers are combinations of firms engaged in the same industry. It is a merger with a direct competitor. The principal objective behind this type of mergers is to achieve economies of scale in the production process by shedding duplication of installations and functions, widening the line of products, decrease in working capital and fixed assets investment, getting rid of competition

and so on. For example, formation of Brook Bond Lipton India Ltd. through the merger of Lipton India and Brook Bond.

2. **Vertical merger:** It is a merger of two organizations that are operating in the same industry but at different stages of production or distribution system. This often leads to increased synergies with the merging firms. If an organization takes over its supplier/producers of raw material, then it leads to backward integration. On the other hand, forward integration happens when an organization decides to take over its buyer organizations or distribution channels. Vertical merger results in operating and financial economies. Vertical mergers help to create an advantageous position by restricting the supply of inputs or by providing them at a higher cost to other players.

3. **Co-generic merger:** In co-generic merger two or more merging organizations are associated in some way or the other related to the production processes, business markets, or basic required technologies. Such merger include the extension of the product line or acquiring components that are required in the daily operations. It offers great opportunities to businesses to diversify around a common set of resources and strategic requirements. For example, an organization manufacturing refrigerators can diversify by merging with another organization having business in kitchen appliances.

4. **Conglomerate merger:** Conglomerate mergers are the combination of organizations that are unrelated to each other. There are no linkages with respect to customer groups, customer functions and technologies being used. There are no important common factors between the organizations in production, marketing, research and development and technology. In practice, however, there is some degree of overlap in one or more of these factors.

12. Diversification refers to a growth strategy where a business markets new products in new markets. It is a strategy by starting up or acquiring businesses outside the company's current products and markets. This strategy is risky because it does not rely on either the company's successful product or its position in established markets. Typically the business is moving into markets in which it has little or no experience. As market conditions change overtime, a company may shift product-market growth strategies.

    For example, when its present market is fully saturated a company may have no choice other than to pursue new market.

    In vertically integrated diversification, firms opt to engage in businesses that are related to the existing business of the firm. The firm remains vertically within the same process. Sequence moves forward or backward in the chain and enters specific product/process steps with the intention of making them into new businesses for the firm.

On the other hand, horizontal Integrated diversification is the acquisition of one or more similar business operating at the same stage of the production-marketing chain that is going into complementary products, by-products or taking over competitors' businesses.

13. Once higher level corporate and business strategies are developed, management need to formulate and implement strategies for each functional area. For effective implementation, strategists have to provide direction to functional managers regarding the plans and policies to be adopted. In fact, the effectiveness of strategic management depends critically on the manner in which strategies are implemented. Strategy of one functional area can not be looked at in isolation, because it is the extent to which all the functional tasks are interwoven that determines the effectiveness of the major strategy.

    Functional area strategy such as marketing, financial, production and Human Resource are based on the functional capabilities of an organisation. For each functional area, first the major sub areas are identified and then for each of these sub functional areas, contents of functional strategies, important factors, and their importance in the process of strategy implementation is identified.

    In terms of the levels of strategy formulation, functional strategies operate below the SBU or business-level strategies. Within functional strategies there might be several sub-functional areas. Functional strategies are made within the higher level strategies and guidelines therein that are set at higher levels of an organisation. Functional managers need guidance from the business strategy in order to make decisions. Operational plans tell the functional managers what has to be done while policies state how the plans are to be implemented.

    Major strategies need to be translated to lower levels to give holistic strategic direction to an organisation. Functional strategies provide details to business strategy & govern as to how key activities of the business will be managed. Functional strategies play two important roles. Firstly, they provide support to the overall business strategy. Secondly, they spell out as to how functional managers will work so as to ensure better performance in their respective functional areas. The reasons why functional strategies are really important and needed for business can be enumerated as follows:

    The development of functional strategies is aimed at making the strategies-formulated at the top management level-practically feasible at the functional level.

    1. Functional strategies facilitate flow of strategic decisions to the different parts of an organisation.

    2. They act as basis for controlling activities in the different functional areas of business.

    3. The time spent by functional managers in decision-making is reduced as plans lay down clearly what is to be done and policies provide the discretionary framework within which decisions need to be taken.

4. Functional strategies help in bringing harmony and coordination as they remain part of major strategies.

5. Similar situations occurring in different functional areas are handled in a consistent manner by the functional managers.

14. Successful implementation of supply management systems require a change from managing individual functions to integrating activities into key supply chain processes. It involves collaborative work between buyers and suppliers, joint product development, common systems and shared information. A key requirement for successfully implementing supply chain will be network of information sharing and management. The partners need to link together to share information through electronic data interchange and take decisions in timely manner.

    Implementing and successfully running supply chain management system will involve:

    1. *Product development:* Customers and suppliers must work together in the product development process. Right from the start the partners will have knowledge of all. Involving all partners will help in shortening the life cycles. Products are developed and launched in shorter time and help organizations to remain competitive.

    2. *Procurement:* Procurement requires careful resource planning, quality issues, identifying sources, negotiation, order placement, inbound transportation and storage. Organizations have to coordinate with suppliers in scheduling without interruptions. Suppliers are involved in planning the manufacturing process.

    3. *Manufacturing:* Flexible manufacturing processes must be in place to respond to market changes. They should be adaptive to accommodate customization and changes in the taste and preferences. Manufacturing should be done on the basis of just-in-time (JIT) and minimum lot sizes. Changes in the manufacturing process be made to reduce manufacturing cycle.

    4. *Physical distribution:* Delivery of final products to customers is the last position in a marketing channel. Availability of the products at the right place at right time is important for each channel participant. Through physical distribution processes serving the customer become an integral part of marketing. Thus supply chain management links a marketing channel with customers.

    5. *Outsourcing:* Outsourcing is not limited to the procurement of materials and components, but also include outsourcing of services that traditionally have been provided within an organization. The company will be able to focus on those activities where it has competency and everything else will be outsourced.

    6. *Customer services:* Organizations through interfaces with the company's production and distribution operations develop customer relationships so as to satisfy them. They work with customer to determine mutually satisfying goals, establish and maintain relationships. This in turn help in producing positive feelings in the organization and the customers.

7. *Performance measurement:* There is a strong relationship between the supplier, customer and organisation. Supplier capabilities and customer relationships can be correlated with a firm performance. Performance is measured in different parameters such as costs, customer service, productivity and quality.

15. The changes in the environmental forces often require businesses to make modifications in their existing strategies and bring out new strategies. Strategic change is a complex process and it involves a corporate strategy focused on new markets, products, services and new ways of doing business. For initiating strategic change, three steps can be identified as under:

    (i) Recognize the need for change: The first step is to diagnose which facets of the present corporate culture are strategy supportive and which are not. This basically means going for environmental scanning involving appraisal of both internal and external capabilities may it be through SWOT analysis and then determine where the lacuna lies and scope for change exists.

    (ii) Create a shared vision to manage change: Objectives and vision of both individuals and organization should coincide. There should be no conflict between them. Senior managers need to constantly and consistently communicate the vision not only to inform but also to overcome resistance through proper communication. Strategy implementers have to convince all those concerned. The actions taken have to be credible, highly visible and unmistakably indicative of management's seriousness to new strategic initiatives and associated changes.

    (iii) Institutionalise the change: This is basically an action stage which requires implementation of changed strategy. Creating and sustaining a different attitude towards change is essential to ensure that the firm does not slip back into old ways of thinking or doing things. Capacity for self-renewal should be a fundamental anchor of the new culture of the firm. Besides, change process must be regularly monitored and reviewed to analyse the after-effects of change. Any discrepancy or deviation should be brought to the notice of persons concerned so that the necessary corrective actions are taken. It takes time for the changed culture to prevail.

    To make the change lasting, Kurt Lewin proposed three phases of the change process for moving the organization from the present to the future. These stages are unfreezing, changing and refreezing.

    (a) Unfreezing the situation: The process of unfreezing simply makes the individuals or organizations aware of the necessity for change and prepares them for such a change. Lewin proposes that the changes should not come as a surprise to the members of the organization. Sudden and unannounced change would be socially destructive and morale lowering. The management must pave the way for the change by first "unfreezing the situation", so that members would be willing and ready to accept the change.

Unfreezing is the process of breaking down the old attitudes and behaviours, customs and traditions so that they start with a clean slate. This can be achieved by making announcements, holding meetings and promoting the ideas throughout the organization.

(b) Changing to new situation: Once the unfreezing process has been completed and the members of the organization recognise the need for change and have been fully prepared to accept such change, their behaviour patterns need to be redefined. H.C. Kellman has proposed three methods for reassigning new patterns of behaviour. These are compliance, identification and internalisation.

Compliance: It is achieved by strictly enforcing the reward and punishment strategy for good or bad behaviour. Fear of punishment, actual punishment or actual reward seems to change behaviour for the better.

Identification: Identification occurs when members are psychologically impressed upon to identify themselves with some given role models whose behaviour they would like to adopt and try to become like them.

Internalization: Internalization involves some internal changing of the individual's thought processes in order to adjust to a new environment. They have given freedom to learn and adopt new behaviour in order to succeed in the new set of circumstances.

(c) Refreezing: Refreezing occurs when the new behaviour becomes a normal way of life. The new behaviour must replace the former behaviour completely for successful and permanent change to take place. In order for the new behaviour to become permanent, it must be continuously reinforced so that this new acquired behaviour does not diminish or extinguish.

Change process is not a one time application but a continuous process due to dynamism and ever changing environment. The process of unfreezing, changing and refreezing is a cyclical one and remains continuously in action.

16. A strategy manager has many different leadership roles to play: visionary, chief entrepreneur and strategist, chief administrator, culture builder, resource acquirer and allocator, capabilities builder, process integrator, crisis solver, spokesperson, negotiator, motivator, arbitrator, policy maker, policy enforcer, and head cheerleader. Sometimes it is useful to be authoritarian; sometimes it is best to be a perceptive listener and a compromising decision maker; sometimes a strongly participative, collegial approach works best; and sometimes being a coach and adviser is the proper role. Many occasions call for a highly visible role and extensive time commitments, while others entail a brief ceremonial performance with the details delegated to subordinates.

For the most part, major change efforts have to be top-down and vision-driven. Leading change has to start with diagnosing the situation and then deciding which of several ways to handle it. Managers have five leadership roles to play in pushing for good strategy execution:

1. Staying on top of what is happening, closely monitoring progress, ferreting out issues, and learning what obstacles lie in the path of good execution.
2. Promoting a culture and esprit de corps that mobilizes and energizes organizational members to execute strategy in a competent fashion and perform at a high level.
3. Keeping the organization responsive to changing conditions, alert for new opportunities, bubbling with innovative ideas, and ahead of rivals in developing competitively valuable competencies and capabilities.
4. Exercising ethics leadership and insisting that the company conduct its affairs like a model corporate citizen.
5. Pushing corrective actions to improve strategy execution and overall strategic performance.

Strategic leadership is the ability of influencing others to voluntarily make decisions that enhance prospects for the organisation's long-term success while maintaining short-term financial stability. Two basic approaches to leadership can be transformational leadership style and transactional leadership style. The difference between transformational and traditional leadership style can be given as follows:

1. Traditional leadership borrowed its concept from formal Top-down type of leadership such as in the military. The style is based on the belief that power is bestowed on the leader, in keeping with the traditions of the past. This type of leadership places managers at the top and workers at the bottom of rung of power.

   In transformational leadership, leader motivates and empowers employees to achieve company's objectives by appealing to higher ideas and values. They use charisma and enthusiasm to inspire people to exert them for the good of the organization.
2. Traditional leadership emphasizes characteristics or behaviours of only one leader within a particular group whereas transformational leadership provides a space to have more than one leader in the same group at the same time. According to the transformational leadership style, a leader at one instance can also be a follower in another instance. Thus there is element of flexibility in the relationships.
3. Traditional leadership is more focused in getting the work done in routine environment. Traditional leaders are effective in achieving the set objectives and goals whereas transformational leaders have behavioural capacity to recognize and react to paradoxes, contradictions and complexities in the environment. Transformational leadership style is more focus on the special skills or talents that the leaders must have to practice to face challenging situations. Transformational leaders work to change the organisational culture by implementing new ideas.

4. In traditional leadership, followers are loyal to the position and what it represents rather than who happens to be holding that position whereas in transformational leadership followers dedicate and admire the quality of the leader not of its position.

17. The impact of the Internet and the rapidly emerging e-commerce environment is profound. The advent of the Internet and online networks changes everything. There can be no doubt that the Internet is a driving force of historical and revolutionary proportions. The coming of ecommerce has changed the character of the market, created new driving forces and key success factors and bred the formation of new strategic groups. The creativeness with which a company incorporates e-commerce practices holds enormous potential for reconfiguring its value chain and affecting its company's competitiveness. Also the Internet economy presents opportunities and threats that demand strategic response and that require managers to craft bold new strategies.

    We need to understand how growing use of the Internet by businesses and consumers reshapes the economic landscape and alters traditional industry boundaries. The following characteristics of the strategy-shaping E-Commerce environment are:

    1. The Internet makes it feasible for companies everywhere to compete in global markets.
    2. Competition in an industry is greatly intensified by the new e-commerce strategic initiatives of existing rivals and by the entry of new, enterprising e-commerce rivals.
    3. Entry barriers into the e-commerce world are relatively low.
    4. Online buyers gain bargaining power because they confront far fewer obstacles to comparing the products, prices, and shipping times of rival vendors.
    5. The Internet makes it feasible for companies to reach beyond their borders to find the best suppliers and, further, to collaborate closely with them to achieve efficiency gains and cost savings.
    6. Internet and PC technologies are advancing rapidly, often in uncertain and unexpected directions.
    7. The internet results in much faster diffusion of new technology and new idea across the world.
    8. The e-commerce environment demands that companies move swiftly.
    9. E-commerce technology opens up a host of opportunities for reconfiguring industry and company value chains.
    10. The Internet can be an economical means of delivering customer service.
    11. The capital for funding potentially profitable e-commerce businesses is readily available.
    12. The needed e-commerce resource in short supply is human talent-in the form of both technological expertise and managerial know-how.

18. For implementing six sigma, there are two separate key methodologies. They are known as DMAIC and DMADV.

    DMAIC is an acronym for five different steps used in six sigma - Define, Measure, Analyze Improve, and control. DMAIC methodology is directed towards improvement of existing product, process or service.

    1. *Define:* To begin with six sigma experts define the process improvement goals that are consistent with the strategy of the organization and customer demands. They discuss different issues with the senior managers so as to define what needs to done.
    2. *Measure:* The existing processes are measured to facilitate future comparison. Six sigma experts collect process data by mapping and measuring relevant processes.
    3. *Analyze:* Verify cause-and-effect relationship between the factors in the processes. Experts need to identify the relationship between the factors. They have to make a comprehensive analysis to identify hidden or not so obvious factor.
    4. *Improve:* On the basis of the analysis experts make a detailed plan to improve.
    5. *Control:* Initial trial or pilots are run to establish process capability and transition to production. Afterwards continuously measure the process to ensure that variances are identified and corrected before they result in defects.

    DMADV is an acronym for Define, Measure, Analyze, Design, and Verify. DMADV is a strategy for designing new products, processes and services.

    1. *Define:* As in case of DMAIC six sigma experts have to formally define goals of the design activity that are consistent with strategy of the organization and the demands of the customer.
    2. *Measure:* Next identify the factors that are critical to quality (CTQs). Measure factors such as product capabilities and production process capability. Also assess the risks involved.
    3. *Analyze:* Develop and design alternatives. Create high-level design and evaluate to select the best design.
    4. *Design:* Develop details of design and optimise it. Verify designs may require using techniques such as simulations.
    5. *Verify:* Verify designs through simulations or pilot runs. Verified and implemented processes are handed over to the process owners.

    However, in spite of different orientation in two methodologies, conceptually there is overlapping between the DMAIC and DMADV as both are essentially having similar objectives.