

Roll No.

Total No. of Questions

Total No. of Printed Pages – 24

Time Allowed – 3 Hours

Maximum Marks – 100

LTC-H

Answers are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate has not opted for Hindi medium, his / her answers in Hindi will not be valued.

Question No. 1 is compulsory.

Answer any five questions from the remaining six questions.

Working notes should form part of the answers.

- | | Marks | | | | | | | | | |
|--|--------------------|-------------|--------|---------|-------------|-------------|---------|-------------|------------|--|
| 1. Answer the following : | 4×5
=20 | | | | | | | | | |
| (a) SHA Limited provides the following trading results : | | | | | | | | | | |
| <table><thead><tr><th>Year</th><th>Sale</th><th>Profit</th></tr></thead><tbody><tr><td>2012-13</td><td>₹ 25,00,000</td><td>10% of Sale</td></tr><tr><td>2013-14</td><td>₹ 20,00,000</td><td>8% of Sale</td></tr></tbody></table> | Year | Sale | Profit | 2012-13 | ₹ 25,00,000 | 10% of Sale | 2013-14 | ₹ 20,00,000 | 8% of Sale | |
| Year | Sale | Profit | | | | | | | | |
| 2012-13 | ₹ 25,00,000 | 10% of Sale | | | | | | | | |
| 2013-14 | ₹ 20,00,000 | 8% of Sale | | | | | | | | |
| You are required to calculate : | | | | | | | | | | |
| (i) Fixed Cost | | | | | | | | | | |
| (ii) Break Even Point | | | | | | | | | | |
| (iii) Amount of profit, if sale is ₹ 30,00,000 | | | | | | | | | | |
| (iv) Sale, when desired profit is ₹ 4,75,000 | | | | | | | | | | |
| (v) Margin of Safety at a profit of ₹ 2,70,000 | | | | | | | | | | |

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- (b) A manufacturing company has disclosed net loss of ₹ 48,700 as per their cost accounting records for the year ended 31st March, 2014. However their financial accounting records disclosed net profit of ₹ 35,400 for the same period. A scrutiny of data of both the sets of books of accounts revealed the following informations :

	₹
(i) Factory overheads under absorbed	30,500
(ii) Administrative overheads over absorbed	65,000
(iii) Depreciation charged in financial accounts	2,25,000
(iv) Depreciation charged in cost accounts	2,70,000
(v) Income-tax provision	52,400
(vi) Transfer fee (credited in financial accounts)	10,200
(vii) Obsolescence loss charged in financial accounts	20,700
(viii) Notional rent of own premises charged in cost accounts	54,000
(ix) Value of opening stock :	
(a) in cost accounts	1,38,000
(b) in financial accounts	1,15,000
(x) Value of closing stock :	
(a) in cost accounts	1,22,000
(b) in financial accounts	1,12,500

Prepare a Memorandum Reconciliation Account by taking costing loss as base.

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- (c) NOOR Limited provides the following information for the year ending 31st March, 2014 :

Equity Share Capital	₹ 25,00,000
Closing Stock	₹ 6,00,000
Stock Turnover Ratio	5 times
Gross Profit Ratio	25%
Net Profit / Sale	20%
Net Profit / Capital	$\frac{1}{4}$

You are required to prepare :

Trading and Profit & Loss Account for the year ending 31st March, 2014.

- (d) The following details are provided by the GPS Limited :

	₹
Equity Share Capital	65,00,000
12% Preference Share Capital	12,00,000
15% Redeemable Debentures	20,00,000
10% Convertible Debentures	8,00,000

The cost of equity capital for the company is 16.30% and Income Tax rate for the company is 30%.

You are required to calculate the Weighted Average Cost of Capital (WACC) of the company.

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2. (a) A company manufactures a product from a raw material, which is purchased at ₹ 80 per kg. The company incurs a handling cost of ₹ 370 plus freight of ₹ 380 per order. The incremental carrying cost of inventory of raw material is ₹ 0.25 per kg per month. In addition, the cost of working capital finance on the investment in inventory of raw material is ₹ 12 per kg per annum. The annual production of the product is 1,00,000 units and 2.5 units are obtained from one kg. of raw material.

Required :

- Calculate the economic order quantity of raw materials.
- Advise, how frequently company should order for procurement be placed.
- If the company proposes to rationalize placement of orders on quarterly basis, what percentage of discount in the price of raw materials should be negotiated ?

Assume 360 days in a year.

- (b) A company had the following Balance Sheet as on 31st March, 2014 :

Liabilities	₹ (in crores)	Assets	₹ (in crores)
Equity Share Capital (50 lakh shares of ₹ 10 each)	5	Fixed Assets (Net)	12.5
Reserves and Surplns	1	Current Assets	7.5
15% Debentures	10		
Current Liabilities	4		
	20		20

The additional information given is as under :

Fixed cost per annum (excluding interest)	₹ 4 crores
Variable operating cost ratio	65%
Total assets turnover ratio	2.5
Income Tax rate	30%

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Marks

Required :

Calculate the following and comment :

- (i) Earnings Per Share
- (ii) Operating Leverage
- (iii) Financial Leverage
- (iv) Combined Leverage

3. (a) M J Pvt. Ltd. produces a product "SKY" which passes through two processes, viz. Process-A and Process-B. The details for the year ending 31st March, 2014 are as follows : 8

	Process – A	Process – B
40,000 Units introduced at a cost of	₹ 3,60,000	–
Material Consumed	₹ 2,42,000	2,25,000
Direct Wages	₹ 2,58,000	1,90,000
Manufacturing Expenses	₹ 1,96,000	1,23,720
Output in Units	37,000	27,000
Normal Wastage of Input	5%	10%
Scrap Value (per unit)	₹ 15	20
Selling Price (per unit)	₹ 37	61

Additional Information :

- (a) 80% of the output of Process-A, was passed on to the next process and the balance was sold. The entire output of Process-B was sold.
- (b) Indirect expenses for the year was ₹ 4,48,080.
- (c) It is assumed that Process-A and Process-B are not responsibility centre.

Required :

- (i) Prepare Process-A and Process-B Account.
- (ii) Prepare Profit & Loss Account showing the net profit / net loss for the year.

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- (b) FH Hospital is considering to purchase a CT-Scan machine. Presently the hospital is outsourcing the CT-Scan Machine and is earning commission of ₹ 15,000 per month (net of tax). The following details are given regarding the machine :

	₹
Cost of CT-Scan machine	15,00,000
Operating cost per annum (excluding Depreciation)	2,25,000
Expected revenue per annum	7,90,000
Salvage value of the machine (after 5 years)	3,00,000
Expected life of the machine	5 years

Assuming tax rate @ 30%, whether it would be profitable for the hospital to purchase the machine ?

Give your recommendation under :

- Net Present Value Method, and
- Profitability Index Method.

PV factors at 12% are given below :

Year	1	2	3	4	5
PV factor	0.893	0.797	0.712	0.636	0.567

4. (a) XYZ Co. Ltd. provides the following information : 8

	Standard	Actual
Production	4,000 Units	3,800 Units
Working Days	20	21
Fixed Overhead	₹ 40,000	₹ 39,000
Variable Overhead	₹ 12,000	₹ 12,000

You are required to calculate following overhead variances :

- Variable Overhead Variance
- Fixed Overhead Variances
 - Expenditure Variance
 - Volume Variance

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- (b) The Balance Sheets of Z Ltd. as on 31st March, 2013 and 31st March, 2014 are as under : 8

Liabilities	2013 ₹	2014 ₹	Assets	2013 ₹	2014 ₹
Equity share capital	15,00,000	20,00,000	Goodwill	5,75,000	4,50,000
12% Redeemable pref. share cap.	7,50,000	5,00,000	Land & Building	10,00,000	8,50,000
General Reserve	2,00,000	3,50,000	Plant	4,00,000	10,00,000
Profit & Loss A/c	1,50,000	2,40,000	Debtors	8,00,000	12,60,000
Creditors	2,75,000	4,15,000	Stock	4,85,000	4,35,000
Outstanding Expenses	1,00,000	80,000	Marketable Securities	75,000	50,000
Provision for Tax	2,00,000	2,50,000	Cash and Bank	50,000	40,000
Proposed Dividend	2,10,000	2,50,000			
	33,85,000	40,85,000		33,85,000	40,85,000

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Additional Information :

- (i) Depreciation charged on Plant and Land & Buildings during the year was ₹ 50,000 and ₹ 1,00,000 respectively.
- (ii) Income-Tax ₹ 1,75,000 was paid during the year 2013-14.
- (iii) An Interim Dividend of ₹ 1,00,000 has been paid in 2013-14.

Prepare Cash Flow Statement.

5. (a) Distinguish between cost control and cost reduction. **4x4**
=16
- (b) Explain the following :
- (i) Explicit costs
 - (ii) Engineered costs
- (c) Discuss emerging issues affecting the future role of Chief Financial Officer (CFO).
- (d) State the main features of Global Depository Receipts (GDRs) and American Depository Receipts (ADRs).

6. (a) M/s ABID Constructions undertook a contract at a price of ₹ 171.00 lacs. The relevant data for the year ended 31st March, 2014 are as under :

	(₹ '000)
Material issued at site	7700
Direct Wages paid	3300
Site office cost	550
Material return to store	175
Work certified	12650
Work uncertified	225
Progress Payment Received	10120
Prepaid site office cost as on 31-03-2014	50
Direct wages outstanding as on 31-03-2014	100
Material at site as on 31-03-2014	110

Additional Information :

- (a) A plant was purchased for the contract at ₹ 8,00,000 on 01-12-2013.
- (b) Depreciation @ 15% per annum is to be charged.
- (c) Material which cost ₹ 1,30,000 was destroyed by fire.

Prepare :

- (i) Contract Account for the year ended 31st March, 2014 and compute the profit to be taken to the Profit & Loss Account.
- (ii) Account of Contractee.
- (iii) Profit & Loss Account showing the relevant items.
- (iv) Balance Sheet showing the relevant items.

(b) Black Limited has furnished the following cost sheet :

8

	₹ / Per Unit
Raw Material	98
Direct Labour	53
Factory Overhead	88
(Includes depreciation of ₹ 15 per unit at budgeted level of activity)	
Total Cost	239
Profit	43
Selling Price	282

Additional Information :

- | | |
|---|----------------------|
| (i) Average raw material in stock | 3 weeks |
| (ii) Average work-in-progress
(% of completion with respect to
Material – 75%
Labour & Overhead – 70%) | 2 weeks |
| (iii) Finished goods in stock | 4 weeks |
| (iv) Credit allowed to debtors | $2\frac{1}{2}$ weeks |
| (v) Credit allowed by creditors | $3\frac{1}{2}$ weeks |
| (vi) Time lag in payments of labour | 2 weeks |
| (vii) Time lag in payments of factory
overheads | $1\frac{1}{2}$ weeks |
| (viii) Company sells 25% of the output against cash | |
| (ix) Cash in hand and bank is desired to be maintained ₹ 2,25,000 | |
| (x) Provision for contingencies is required @ 4% of working capital requirement including that provision. | |

You may assume that production is carried on evenly throughout the year and labour and factory overheads accrue similarly.

You are required to prepare a statement showing estimate of working capital needed to finance a budgeted activity level of 104000 units of production. Finished stock, debtors and overhead are taken at cash cost.

7. Answer any **four** of the following :

4×4

=16

- (a) Distinguish between allocation and apportionment of cost.
- (b) Describe the salient features of budget manual.
- (c) Explain the following :
 - (i) Concentration Banking
 - (ii) Lock Box System
- (d) Comment on the Debt Service Coverage Ratio.
- (e) (i) Name any four financial instruments, 'which are related to international financial market.
 - (ii) State the unit of cost for the followings :
 - (1) Transport
 - (2) Power
 - (3) Hotel
 - (4) Hospital

LTC-H**(Hindi Version)**

उन परीक्षार्थियों को छोड़कर जिन्होंने हिन्दी माध्यम चुना है, प्रश्नों के उत्तर केवल अंग्रेजी में ही देना है ।

वह परीक्षार्थी जिसने हिन्दी माध्यम नहीं चुना है, यदि हिन्दी में उत्तर देता है,

तो उसके हिन्दी में दिये गये उत्तरों का मूल्यांकन नहीं होगा ।

प्रश्न संख्या 1 अनिवार्य है ।

शेष छः प्रश्नों में से किन्हीं पाँच प्रश्नों के उत्तर दीजिए ।

कार्य टिप्पणियाँ (Working Notes) उत्तर के भाग होने चाहिए ।

- | | Marks | | | | | | | | | |
|---|--------------------|---------------|-----|---------|-------------|---------------|---------|-------------|--------------|--|
| 1. निम्नलिखित के उत्तर दीजिए : | 4×5
=20 | | | | | | | | | |
| (a) एसएचए लि. निम्नलिखित व्यापारिक परिणाम प्रदर्शित करती है : | | | | | | | | | | |
| <table border="0" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">वर्ष</th> <th style="text-align: center;">विक्रय</th> <th style="text-align: center;">लाभ</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2012-13</td> <td style="text-align: center;">₹ 25,00,000</td> <td style="text-align: center;">विक्रय का 10%</td> </tr> <tr> <td style="text-align: center;">2013-14</td> <td style="text-align: center;">₹ 20,00,000</td> <td style="text-align: center;">विक्रय का 8%</td> </tr> </tbody> </table> | वर्ष | विक्रय | लाभ | 2012-13 | ₹ 25,00,000 | विक्रय का 10% | 2013-14 | ₹ 20,00,000 | विक्रय का 8% | |
| वर्ष | विक्रय | लाभ | | | | | | | | |
| 2012-13 | ₹ 25,00,000 | विक्रय का 10% | | | | | | | | |
| 2013-14 | ₹ 20,00,000 | विक्रय का 8% | | | | | | | | |
| आपसे अपेक्षित है कि निम्नलिखित की गणना कीजिए : | | | | | | | | | | |
| (i) स्थिर लागत | | | | | | | | | | |
| (ii) सम-विच्छेद बिन्दु | | | | | | | | | | |
| (iii) लाभ की राशि, जब विक्रय ₹ 30,00,000 हो | | | | | | | | | | |
| (iv) विक्रय, यदि वांछित लाभ ₹ 4,75,000 हो | | | | | | | | | | |
| (v) ₹ 2,70,000 के लाभ पर सुरक्षा की सीमा | | | | | | | | | | |

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- (b) एक निर्माणी कम्पनी ने 31 मार्च 2014 को समाप्त होने वाले वर्ष के लिए लागत लेखा पुस्तकों के आधार पर ₹ 48,700 की हानि प्रदर्शित की है। जबकि कम्पनी के वित्तीय लेखा पुस्तकों ने उसी समयावधि में ₹ 35,400 का लाभ प्रदर्शित किया है। दोनों लेखा पुस्तकों की जाँच के उपरान्त निम्नलिखित सूचनायें प्राप्त हुईं :

	₹
(i) अल्प अवशोषित कारखाना उपरिव्यय	30,500
(ii) अधि अवशोषित प्रशासनिक उपरिव्यय	65,000
(iii) वित्तीय खातों में काटा गया ह्रास	2,25,000
(iv) लागत लेखों में काटा गया ह्रास	2,70,000
(v) आयकर का प्रावधान	52,400
(vi) हस्तान्तरण शुल्क (वित्तीय लेखों में जमा)	10,200
(vii) अप्रचलन (obsolescence) ह्रास वित्तीय लेखों में कम आँका गया	20,700
(viii) कम्पनी परिसर का नाम मात्र किराया लागत लेखों में चार्ज किया गया	54,000
(ix) प्रारम्भिक रहितये का मूल्य :	
(a) लागत लेखों में	1,38,000
(b) वित्तीय लेखों में	1,15,000
(x) अन्तिम रहितये का मूल्य :	
(a) लागत लेखों में	1,22,000
(b) वित्तीय लेखों में	1,12,500

लागत लेखों की हानि की आधार मानते हुए स्मरण-पत्र समाधान खाता (Memorandum Reconciliation Account) तैयार कीजिए।

- (c) नूर लि. ने 31 मार्च 2014 को समाप्त होने वाले वर्ष के लिए निम्नलिखित सूचनाएँ प्रदान की हैं :

समता अंश पूँजी	₹ 25,00,000
अन्तिम रहतिया	₹ 6,00,000
रहतिया आवर्त अनुपात	5 गुना
सकल लाभ अनुपात	25%
शुद्ध लाभ / विक्रय	20%
शुद्ध लाभ / पूँजी	$\frac{1}{4}$

आपसे अपेक्षा है कि 31 मार्च 2014 को समाप्त होने वाले वर्ष के लिए व्यापारिक एवं लाभ-हानि खाता तैयार कीजिए ।

- (d) जीपीएस लि. द्वारा निम्नलिखित विवरण प्राप्त हुए :

	₹
समता अंश पूँजी	65,00,000
12% पूर्वाधिकार अंश पूँजी	12,00,000
15% शोधनीय ऋणपत्र	20,00,000
10% परिवर्तनीय ऋणपत्र	8,00,000

कम्पनी को समता पूँजी की लागत 16.30% है तथा कम्पनी के लिए आयकर की दर 30% है ।

आपसे अपेक्षा है कि कम्पनी की पूँजी की भारित औसत लागत की गणना कीजिए ।

2. (a) एक कम्पनी किसी वस्तु का उत्पादन करती है जो एक ऐसी सामग्री से निर्मित होती है जिसे ₹ 80 प्रति किग्रा को दर से क्रय किया जाता है । कम्पनी को उक्त सामग्री के प्रति आदेश हस्तस्थ लागत ₹ 370 तथा हुलाई व्यय ₹ 380 पड़ता है । कच्चे माल की इन्वेण्टरी की वर्धनीय वहन लागत ₹ 0.25 प्रति किग्रा प्रति माह है । इसके अतिरिक्त, कच्चे माल की इन्वेण्टरी में विनियोग पर कार्यशील पूँजी की वित्तीयन लागत ₹ 12 प्रति किग्रा प्रति वर्ष है । वस्तु का वार्षिक उत्पादन 1,00,000 इकाइयाँ हैं तथा एक किग्रा के कच्चे माल से 2.5 इकाइयाँ प्राप्त की जाती हैं ।

अपेक्षित है :

- कच्चे माल को आर्थिक आदेश मात्रा (Economic Order Quantity) को गणना कीजिए ।
- सुझाव दीजिए कि कम्पनी किस आवृत्ति से कच्चे माल की प्राप्ति हेतु आदेश प्रेषित करे ।
- यदि कम्पनी तिमाही आधार पर आदेश प्रेषित करने का प्रस्ताव करती है तो कच्चे माल की कीमत पर कितने प्रतिशत छूट पर बातचीत करनी चाहिए ?

एक वर्ष में 360 दिन की कल्पना कीजिए ।

- (b) किसी कम्पनी का 31 मार्च 2014 को समाप्त होने वाले वर्ष का आर्थिक चिह्न निम्नवत् था :

दायित्व	₹ (करोड़ में)	सम्पत्तियाँ	₹ (करोड़ में)
समता अंश पूँजी		स्थायी सम्पत्तियाँ	
50 लाख अंश प्रत्येक ₹ 10 के	5	(शुद्ध)	12.5
संचय एवं आधिक्य	1	चालू सम्पत्तियाँ	7.5
15% ऋणपत्र	10		
चालू दायित्व	4		
	20		20

अतिरिक्त सूचनार्थे निम्न प्रकार से दी गयी है :

स्थिर लागत प्रतिवर्ष (ब्याज को छोड़कर)	₹ 4 करोड़
परिघटनशील परिचालन लागत अनुपात	65%
कुल सम्पत्ति आवृत्ति अनुपात	2.5
आयकर की दर	30%

अपेक्षित है :

- प्रति अंश आय (Earnings Per Share)
- संचालन लीवरेज (Operating Leverage)
- वित्तीय लीवरेज (Financial Leverage)
- संयुक्त लीवरेज (Combined Leverage)

3. (a) एम जे प्रा. लि. उत्पाद "SKY" का निर्माण करती है जो दो प्रक्रियाओं से होकर गुजरता है : 8
प्रक्रिया - A तथा प्रक्रिया - B. 31 मार्च 2014 को समाप्त होने वाले वर्ष के लिए विवरण निम्नवत् है :

	प्रक्रिया - A	प्रक्रिया - B
40,000 इकाइयों प्रयुक्त लागत	₹ 3,60,000	-
प्रयुक्त सामग्री	₹ 2,42,000	₹ 2,25,000
प्रत्यक्ष मजदूरी	₹ 2,58,000	₹ 1,90,000
विनिर्माणी व्यय	₹ 1,96,000	₹ 1,23,720
उत्पादन (इकाइयों में)	37,000	27,000
सामान्य क्षय	5%	10%
स्क्रेप मूल्य (प्रति इकाई)	₹ 15	₹ 20
विक्रय मूल्य (प्रति इकाई)	₹ 37	₹ 61

अतिरिक्त सूचनाएँ :

- (a) प्रक्रिया - A का 80% उत्पादन अगले प्रक्रिया को हस्तान्तरित किया जाता है तथा बाकी को बेच दिया जाता है। प्रक्रिया - B का समस्त उत्पादन बेच दिया जाता है।
- (b) वर्ष के अप्रत्यक्ष व्यय ₹ 4,48,080 थे।
- (c) यह भी कल्पना कीजिए कि प्रक्रिया - A तथा प्रक्रिया - B उत्तरदायित्व केन्द्र नहीं हैं।
- अपेक्षित है :
- (i) प्रक्रिया - A खाता तथा प्रक्रिया - B खाता तैयार कीजिए।
- (ii) वर्ष के शुद्ध लाभ/शुद्ध हानि प्रदर्शित करते हुए लाभ-हानि खाता तैयार कीजिए।

- (b) एफ एच अस्पताल एक CT-स्कैन मशीन को क्रय करने पर विचार कर रहा है। वर्तमान समय में अस्पताल ने एक CT-स्कैन मशीन को आउटसोर्स किया है जिससे कमीशन ₹ 15,000 प्रतिमाह (करोपरान्त) प्राप्त होता है। मशीन से सम्बन्धित निम्नलिखित विवरण दिये गये हैं :

	₹
CT-स्कैन मशीन की लागत	15,00,000
परिचालन लागत (प्रति वर्ष) (हास को छोड़कर)	2,25,000
प्रत्याशित आगम (प्रति वर्ष)	7,90,000
मशीन का अवशेष मूल्य (पाँचवें वर्ष के पश्चात्)	3,00,000
मशीन का प्रत्याशित जीवन	5 वर्ष

कर की दर 30% मानते हुए क्या मशीन को क्रय करना अस्पताल के लिए लाभप्रद होगा ?

निम्नलिखित के अन्तर्गत अपनी संस्तुति दीजिए :

- (i) शुद्ध वर्तमान मूल्य पद्धति ; तथा
(ii) लाभदायकता निर्देशांक पद्धति ।

वर्तमान मूल्य घटक 12% की दर पर निम्नवत् है :

वर्ष	1	2	3	4	5
वर्तमान मूल्य घटक	0.893	0.797	0.712	0.636	0.567

4. (a) XYZ कं. लि. ने निम्नलिखित सूचनार्थे प्रदान की है :

8

	प्रमाण	वास्तविक
उत्पादन	4,000 इकाइयाँ	3,800 इकाइयाँ
कार्यकारी दिन	20	21
स्थिर उपरिच्यय	₹ 40,000	₹ 39,000
परिवर्तनशील उपरिच्यय	₹ 12,000	₹ 12,000

निम्नलिखित उपरिव्यय विचरणों की गणना करना आपसे अपेक्षित है :

- (a) परिवर्तनशील उपरिव्यय विचरण
 (b) स्थिर उपरिव्यय विचरण
 (i) व्यय विचरण
 (ii) मात्रा (volume) विचरण

(b) Z लि. के 31 मार्च 2013 तथा 31 मार्च 2014 को आर्थिक चिह्ने निम्नवत् हैं :

8

दायित्व	2013 ₹	2014 ₹	सम्पत्तियाँ	2013 ₹	2014 ₹
समता अंश पूँजी	15,00,000	20,00,000	ख्याति	5,75,000	4,50,000
12% शोधनीय पूर्वाधिकार अंश पूँजी	7,50,000	5,00,000	भूमि एवं भवन	10,00,000	8,50,000
सामान्य संचय	2,00,000	3,50,000	संयन्त्र	4,00,000	10,00,000
लाभ-हानि खाता	1,50,000	2,40,000	देनदार	8,00,000	12,60,000
लेनदार	2,75,000	4,15,000	स्टॉक	4,85,000	4,35,000
बकाया व्यय	1,00,000	80,000	विपणन योग्य प्रतिभूतियाँ	75,000	50,000
कर के लिए प्रावधान	2,00,000	2,50,000	रोकड़ एवं बैंक	50,000	40,000
प्रस्तावित लाभांश	2,10,000	2,50,000			
	33,85,000	40,85,000		33,85,000	40,85,000

अतिरिक्त सूचनाएँ :

- (i) संयन्त्र तथा भूमि एवं भवन पर वर्ष के दौरान क्रमशः ₹ 50,000 तथा ₹ 1,00,000 ह्रास काटा गया ।
- (ii) वर्ष 2013-14 के दौरान ₹ 1,75,000 का आयकर भुगतान किया गया ।
- (iii) 2013-14 में ₹ 1,00,000 का अन्तरिम लाभांश दिया गया ।

नकद प्रवाह विवरण तैयार कीजिए ।

5. (a) लागत नियंत्रण एवं लागत कटौती में भेद स्पष्ट कीजिए ।

4×4
=16

- (b) निम्नलिखित की व्याख्या कीजिए :

(i) स्पष्ट लागतें

(ii) इंजीनियर्ड लागतें

- (c) मुख्य वित्तीय अधिकारी (Chief Financial Officer) की भावी भूमिका को प्रभावित करने वाले उद्घाटित बिन्दुओं (Emerging Issues) की विवेचना कीजिए ।

- (d) ग्लोबल डिपॉजिटरी प्राप्तियों (GDRs) तथा अमेरिकी डिपॉजिटरी प्राप्तियों (ADRs) के मुख्य लक्षणों को स्पष्ट कीजिए ।

6. (a) मेसर्स आबिद कन्स्ट्रक्शन्स ने ₹ 171.00 लाख मूल्य का एक ठेका लिया। 31 मार्च 2014 को समाप्त होने वाले वर्ष से सम्बन्धित विवरण निम्नलिखित है :

	(₹ '000)
कार्यस्थल पर निर्गमित सामग्री	7700
प्रत्यक्ष मजदूरी का भुगतान	3300
कार्यस्थल कार्यालय की लागत	550
स्टोर को वापस की गयी सामग्री	175
प्रमाणित कार्य	12650
अप्रमाणित कार्य	225
कार्यप्रगति भुगतान प्राप्त	10120
पूर्वदत्त कार्यस्थल कार्यालय लागत (31-03-2014 को)	50
बकाया प्रत्यक्ष मजदूरी (31-03-2014 को)	100
कार्यस्थल पर सामग्री (31-03-2014 को)	110

अतिरिक्त सूचनाएँ :

- (a) 01-12-2013 को ठेके के लिए एक संयंत्र ₹ 8,00,000 की लागत से क्रय किया गया।
- (b) 15% प्रति वर्ष की दर से ह्रास काटा जाना है।
- (c) सामग्री जिसकी लागत ₹ 1,30,000 थी, आग से नष्ट हो गयी।

तैयार कीजिए :

- (i) 31 मार्च 2014 को समाप्त होने वाले वर्ष के लिए टेका खाता तथा लाभ-हानि खाता में दिखाए जाने वाले लाभ की गणना ।
- (ii) टेकेदार का खाता
- (iii) सम्बन्धित मर्दों की दर्शाते हुए लाभ-हानि खाता
- (iv) सम्बन्धित मर्दों को दर्शाते हुए आर्थिक चिह्न
- (b) ब्लैक लि. ने निम्नलिखित लागत पत्र प्रदर्शित किया है :

8

	₹ / प्रति इकाई
कच्चा माल	98
प्रत्यक्ष श्रम	53
कारखाना उपरिचय	88
(कार्यक्षमता के बजटेड स्तर पर प्रति इकाई ₹ 15 हास शामिल है)	
	239
लाभ	43
	282
विक्रय मूल्य	282

अतिरिक्त सूचनायें :

- | | |
|---|-----------------------|
| (i) स्टॉक में औसत कच्चा माल | 3 सप्ताह |
| (ii) औसत निर्माणधीन कार्य (WIP) | 2 सप्ताह |
| (पूर्णता का प्रतिशत : | |
| सामग्री - 75% | |
| श्रम एवं उपरिख्य - 70%) | |
| (iii) स्टॉक में निर्मित माल | 4 सप्ताह |
| (iv) देनदारों को अनुमन्य साख | $\frac{1}{2}$ सप्ताह |
| (v) लेनदारों से अनुमन्य साख | $3\frac{1}{2}$ सप्ताह |
| (vi) श्रमिकों के भुगतान में समय-अन्तराल | 2 सप्ताह |
| (vii) कारखाना उपरिख्य के भुगतान में समय-अन्तराल | $1\frac{1}{2}$ सप्ताह |
| (viii) कम्पनी उत्पादन का 25% नकद आधार पर विक्रय करती है । | |
| (ix) हस्तस्थ तथा बैंक में अपेक्षित रोकड़ | ₹ 2,25,000 |
| (x) भविष्यताओं (contingencies) के लिए अपेक्षित प्रावधान - प्रावधान को सम्मिलित करते हुए कार्यशील पूँजी का 4%. | |
- यह मानते हुए कि उत्पादन वर्ष भर समान रूप से वितरित है तथा श्रम एवं उपरिख्य उसी प्रकार वर्ष भर समान रूप से घटित हैं ।
- 1,04,000 इकाइयों के बजटेट क्रियाकलाप स्तर के वित्तीयन हेतु कार्यशील पूँजी का आकलन करते हुए विवरण-पत्र तैयार कीजिए । निर्मित स्टॉक, देनदार तथा उपरिख्य का व्यवहार नकद लागत आधार पर करना है ।

7. निम्नलिखित में से किन्हीं चार के उत्तर दीजिए : 4×4
=16
- (a) लागत बँटवारा तथा लागत अभिभाजन में भेद स्पष्ट कीजिए ।
- (b) बजट-मैनुअल के विशिष्ट लक्षणों को स्पष्ट कीजिए ।
- (c) निम्नलिखित की व्याख्या कीजिए :
- (i) संघनन (Concentration) बैंकिंग
- (ii) लॉक-बॉक्स व्यवस्था
- (d) ऋण-सेवा कवरेज अनुपात पर टिप्पणी कीजिए ।
- (e) (i) अन्तर्राष्ट्रीय वित्तीय बाजार से सम्बन्धित किन्हीं चार वित्तीय उपकरणों के नाम बताइए ।
- (ii) निम्नलिखित के लिए लागत को इकाई को स्पष्ट कीजिए :
- (1) परिवहन (Transport)
- (2) शक्ति (Power)
- (3) होटल (Hotel)
- (4) अस्पताल (Hospital)
-

PAPER – 3 : COST ACCOUNTING AND FINANCIAL MANAGEMENT

Question No. 1 is compulsory.

Attempt any **five** questions from the remaining **six** questions.

Working notes should form part of the answers.

Question 1

(a) SHA Limited provides the following trading results:

Year	Sale	Profit
2012-13	₹ 25,00,000	10% of Sale
2013-14	₹ 20,00,000	8% of Sale

You are required to calculate:

- (i) Fixed Cost
 - (ii) Break Even Point
 - (iii) Amount of profit, if sale is ₹ 30,00,000
 - (iv) Sale, when desired profit is ₹ 4,75,000
 - (v) Margin of Safety at a profit of ₹ 2,70,000
- (b) A manufacturing company has disclosed net loss of ₹ 48,700 as per their cost accounting records for the year ended 31st March, 2014. However their financial accounting records disclosed net profit of ₹ 35,400 for the same period. A scrutiny of data of both the sets of books of accounts revealed the following informations:

	₹
(i) Factory overheads under absorbed	30,500
(ii) Administrative overheads over absorbed	65,000
(iii) Depreciation charged in financial accounts	2,25,000
(iv) Depreciation charged in cost accounts	2,70,000
(v) Income-tax provision	52,400
(vi) Transfer fee (credited in financial accounts)	10,200
(vii) Obsolescence loss charged in financial accounts	20,700
(viii) Notional rent of own premises charged in cost accounts	54,000
(ix) Value of opening stock:	
(a) in cost accounts	1,38,000
(b) in financial accounts	1,15,000

(x)	Value of closing stock:	
(a)	in cost accounts	1,22,000
(b)	in financial accounts	1,12,500

Prepare a Memorandum Reconciliation Account by taking costing loss as base.

(c) NOOR Limited provides the following information for the year ending 31st March, 2014:

Equity Share Capital	₹25,00,000
Closing Stock	₹6,00,000
Stock Turnover Ratio	5 times
Gross Profit Ratio	25%
Net Profit / Sale	20%
Net Profit / Capital	$\frac{1}{4}$

You are required to prepare:

Trading and Profit & Loss Account for the year ending 31st March, 2014.

(d) The following details are provided by the GPS Limited :

	₹
Equity Share Capital	65,00,000
12% Preference Share Capital	12,00,000
15% Redeemable Debentures	20,00,000
10% Convertible Debentures	8,00,000

The cost of equity capital for the company is 16.30% and Income Tax rate for the company is 30%.

You are required to calculate the Weighted Average Cost of Capital (WACC) of the company.
(4 × 5 = 20 Marks)

Answer

(a) **Workings:**

Profit in year 2012-13 = ₹ 25,00,000 × 10% = ₹ 2,50,000

Profit in year 2013-14 = ₹ 20,00,000 × 8% = ₹ 1,60,000

So, P/V Ratio = $\frac{\text{Change in Profit}}{\text{Change in Sales}} \times 100$

$$= \frac{\text{₹ } 2,50,000 - \text{₹ } 1,60,000}{\text{₹ } 25,00,000 - \text{₹ } 20,00,000} \times 100$$

$$= \frac{\text{₹ } 90,000}{\text{₹ } 5,00,000} \times 100 = 18\%$$

(i) Fixed Cost = Contribution (in year 2012-13) – Profit (in year 2012-13)

$$= (\text{Sales} \times \text{P/V Ratio}) - \text{₹ } 2,50,000$$

$$= (\text{₹ } 25,00,000 \times 18\%) - \text{₹ } 2,50,000$$

$$= \text{₹ } 4,50,000 - \text{₹ } 2,50,000$$

$$= \text{₹ } 2,00,000$$

(ii) Break-even Point (in Sales) = $\frac{\text{Fixed Cost}}{\text{P/V Ratio}}$

$$= \frac{\text{₹ } 2,00,000}{18\%} = \text{₹ } 11,11,111 \text{ (Approx)}$$

(iii) Calculation of profit, if sale is ₹ 30,00,000

Profit = Contribution – Fixed Cost

$$= (\text{Sales} \times \text{P/V Ratio}) - \text{Fixed Cost}$$

$$= (\text{₹ } 30,00,000 \times 18\%) - \text{₹ } 2,00,000$$

$$= \text{₹ } 5,40,000 - \text{₹ } 2,00,000 = \text{₹ } 3,40,000$$

So profit is ₹ 3,40,000, if Sale is ₹ 30,00,000.

(iv) Calculation of Sale, when desired Profit is ₹ 4,75,000

Contribution Required = Desired Profit + Fixed Cost

$$= \text{₹ } 4,75,000 + \text{₹ } 2,00,000 = \text{₹ } 6,75,000$$

$$\text{Sales} = \frac{\text{Contribution}}{\text{P/V Ratio}} = \frac{\text{₹ } 6,75,000}{18\%} = \text{₹ } 37,50,000$$

Sales is ₹ 37,50,000 when desired profit is ₹ 4,75,000.

(v) Margin of Safety = $\frac{\text{Profit}}{\text{P/V Ratio}}$

$$= \frac{\text{₹ } 2,70,000}{18\%} = \text{₹ } 15,00,000$$

So Margin of Safety is ₹ 15,00,000 at a profit of ₹ 2,70,000

(b) Memorandum Reconciliation Accounts

Dr.		Cr.	
Particulars	Amount (₹)	Particulars	Amount (₹)
To Net Loss as per Cost Accounts	48,700	By Administration overheads over recovered in Cost Accounts	65,000
To Factory overheads under absorbed in Cost Accounts	30,500	By Depreciation overcharged in Cost Accounts (₹ 2,70,000 – ₹ 2,25,000)	45,000
To Provision for Income tax	52,400	By Transfer fees in Financial Accounts	10,200
To Obsolescence loss	20,700	By Notional Rent of own premises	54,000
To Overvaluation of closing stock in Cost Accounts**	9,500	By Overvaluation of Opening stock in Cost Accounts*	23,000
To Net Profit (as per Financial Accounts)	35,400		
	1,97,200		1,97,200

* Overvaluation of Opening Stock as per Cost Accounts
= Value in Cost Accounts – Value in Financial Accounts
= ₹ 1,38,000 – ₹ 1,15,000 = ₹ 23,000.

** Overvaluation of Closing Stock as per Cost Accounts
= Value in Cost Accounts – Value in Financial Accounts
= ₹ 1,22,000 – ₹ 1,12,500 = ₹ 9,500.

(c) Working Notes:

$$(i) \quad \frac{\text{Net Profit}}{\text{Capital}} = \frac{1}{4}$$

$$\frac{\text{Net Profit}}{25,00,000} = \frac{1}{4}$$

$$\text{Net Profit} = 6,25,000$$

$$(ii) \quad \frac{\text{Net Profit}}{\text{Sale}} = 20\%$$

$$\text{Sale} = \frac{6,25,000}{0.20} = 31,25,000$$

$$\begin{aligned}
 \text{(iii) Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Sales}} \times 100 \\
 25 &= \frac{\text{Gross Profit}}{31,25,000} \times 100 \\
 \text{Gross Profit} &= \frac{31,25,000 \times 25}{100} \\
 &= 7,81,250 \\
 \text{(iv) Stock Turnover} &= \frac{\text{COGS}}{\text{Average Stock}} \\
 5 &= \left(\frac{31,25,000 - 7,81,250}{\text{Average Stock}} \right) \\
 \text{Average Stock} &= \frac{23,43,750}{5} \\
 &= 4,68,750 \\
 \text{(v) Average Stock} &= \frac{\text{Closing Stock} + \text{Opening Stock}}{2} \\
 4,68,750 &= \frac{6,00,000 + \text{Opening Stock}}{2} \\
 \text{Opening Stock} &= 9,37,500 - 6,00,000 = 3,37,500
 \end{aligned}$$

Trading A/c for the year ending 31st March, 2014

	₹		₹
To Opening Stock	3,37,500	By Sales	31,25,000
To Purchases (Balancing figure)	26,06,250	By Closing Stock	6,00,000
To Gross Profit c/f to P&L A/c	<u>7,81,250</u>		-
	<u>37,25,000</u>		<u>37,25,000</u>

Profit & Loss A/c for the year ending 31st March, 2014

	₹		₹
To Miscellaneous Expenses (balancing figure)	1,56,250	By Gross Profit b/f from Trading A/c	7,81,250
To Net Profit	<u>6,25,000</u>		-
	<u>7,81,250</u>		<u>7,81,250</u>

(d) Calculation of Weighted Average Cost of Capital (WACC)

Source	Amount (₹)	Weight	Cost of Capital after tax	WACC
Equity Capital	65,00,000	0.619	0.163	0.1009
12% Preference Capital	12,00,000	0.114	0.120	0.0137
15% Redeemable Debentures	20,00,000	0.190	0.105*	0.020
10% Convertible Debentures	<u>8,00,000</u>	<u>0.076</u>	0.07**	<u>0.0053</u>
Total	<u>1,05,00,000</u>	<u>1.0000</u>		<u>0.1399</u>

* Cost of Debentures (after tax) = $15 (1 - 0.30) = 10.5\% = 0.105$

** Cost of Debentures (after tax) = $10 (1 - 0.30) = 7\% = 0.07$

Weighted Average Cost of Capital = $0.1399 = 13.99\%$

(Note: In the above solution, the Cost of Debentures has been computed in the above manner without considering the impact of special features i.e. redeemability and convertibility in absence of requisite information.)

Question 2

- (a) A company manufactures a product from a raw material, which is purchased at ₹ 80 per kg. The company incurs a handling cost of ₹ 370 plus freight of ₹ 380 per order. The incremental carrying cost of inventory of raw material is ₹ 0.25 per kg per month. In addition, the cost of working capital finance on the investment in inventory of raw material is ₹ 12 per kg per annum. The annual production of the product is 1,00,000 units and 2.5 units are obtained from one kg. of raw material.

Required:

- Calculate the economic order quantity of raw materials.
- Advise, how frequently company should order for procurement be placed.
- If the company proposes to rationalize placement of orders on quarterly basis, what percentage of discount in the price of raw materials should be negotiated?

Assume 360 days in a year.

(8 Marks)

- (b) A company had the following Balance Sheet as on 31st March, 2014:

Liabilities	₹ (In crores)	Assets	₹ (In crores)
Equity Share Capital (50 lakhs shares of ₹ 10 each)	5		
Reserves and Surplus	1	Fixed Assets (Net)	12.5
15% Debentures	10	Current Assets	7.5
Current Liabilities	4		
	20		20

The additional information given is as under:

Fixed cost per annum (excluding interest)	₹ 4 crores
Variable operating cost ratio	65%
Total assets turnover ratio	2.5
Income Tax rate	30%

Required:

Calculate the following and comment:

- (i) Earnings Per Share
- (ii) Operating Leverage
- (iii) Financial Leverage
- (iv) Combined Leverage

(8 Marks)

Answer

(a) (i) Calculation of Economic Order Quantity (E.O.Q)

$$\text{Annual requirement (usage) of raw material in kg. (A)} = \frac{1,00,000 \text{ units}}{2.5 \text{ units per kg.}} = 40,000 \text{ kg.}$$

$$\text{Ordering Cost (Handling \& freight cost) (O)} = ₹ 370 + ₹ 380 = ₹ 750$$

$$\begin{aligned} \text{Carrying cost per unit per annum (C) i.e. inventory carrying cost + working capital cost} \\ = (\₹ 0.25 \times 12 \text{ months}) + ₹ 12 \\ = ₹ 15 \text{ per kg.} \end{aligned}$$

$$\text{E.O.Q.} = \sqrt{\frac{2AO}{C}} = \sqrt{\frac{2 \times 40,000 \text{ kg.} \times ₹ 750}{₹ 15}} = 2,000 \text{ kg.}$$

(ii) Frequency of placing orders for procurement:

$$\text{Annual consumption (A)} = 40,000 \text{ kg.}$$

$$\text{Quantity per order (E.O.Q)} = 2,000 \text{ kg.}$$

$$\text{No. of orders per annum } \left(\frac{A}{\text{E.O.Q}} \right) = \frac{40,000 \text{ kg.}}{2,000 \text{ kg.}} = 20 \text{ orders}$$

$$\text{Frequency of placing orders (in days)} = \frac{360 \text{ days}}{20 \text{ orders}} = 18 \text{ days}$$

(iii) Percentage of discount in the price of raw materials to be negotiated:

Particulars	On Quarterly Basis	On E.O.Q Basis
1. Annual Usage (in Kg.)	40,000 kg.	40,000 kg.
2. Size of the order	10,000 kg.	2,000 kg.
3. No. of orders (1 ÷ 2)	4	20
4. Cost of placing orders or Ordering cost (No. of order × Cost per order)	₹ 3,000 (4 order × ₹ 750)	₹ 15,000 (20 orders × ₹ 750)
5. Inventory carrying cost (Average inventory × Carrying cost per unit)	₹ 75,000 (10,000 kg. × ½ × ₹ 15)	₹ 15,000 (2,000 kg. × ½ × ₹ 15)
6. Total Cost (4 + 5)	₹ 78,000	₹ 30,000

When order is placed on quarterly basis the ordering cost and carrying cost increased by ₹ 48,000 (₹78,000 - ₹30,000).

So, discount required = ₹ 48,000

Total annual purchase = 40,000 kg. × ₹ 80 = ₹ 32,00,000

So, Percentage of discount to be negotiated = $\frac{₹ 48,000}{₹ 32,00,000} \times 100 = 1.5\%$

- (b) Total Assets = ₹ 20 crores
 Total Asset Turnover Ratio = 2.5
 Hence, Total Sales = 20 × 2.5 = ₹ 50 crores

Computation of Profit after Tax (PAT)

	(₹ in crores)
Sales	50.00
Less: Variable Operating Cost @ 65%	<u>32.50</u>
Contribution	17.50
Less: Fixed Cost (other than Interest)	<u>4.00</u>
EBIT	13.50
Less: Interest on Debentures (15% × 10)	<u>1.50</u>
PBT	12.00
Less: Tax @ 30%	<u>3.60</u>
PAT	<u>8.40</u>

(i) Earnings per Share

$$\begin{aligned} \text{EPS} &= \frac{8.40 \text{ crores}}{\text{Number of Equity Shares}} \\ &= \frac{8.40 \text{ crores}}{50,00,000} = ₹ 16.80 \end{aligned}$$

It indicates the amount the company earns per share. Investors use this as a guide while valuing the share and making investment decisions. It is also a indicator used in comparing firms within an industry or industry segment.

(ii) Operating Leverage

$$\begin{aligned} \text{Operating Leverage} &= \frac{\text{Contribution}}{\text{EBIT}} \\ &= \frac{17.50}{13.50} \\ &= 1.296 \end{aligned}$$

It indicates the choice of technology and fixed cost in cost structure. It is level specific. When firm operates beyond operating break-even level, then operating leverage is low. It indicates sensitivity of earnings before interest and tax (EBIT) to change in sales at a particular level.

(iii) Financial Leverage

$$\begin{aligned} \text{Financial Leverage} &= \frac{\text{EBIT}}{\text{PBT}} \\ &= \frac{13.50}{12.00} = 1.125 \end{aligned}$$

The financial leverage is very comfortable since the debt service obligation is small vis-à-vis EBIT.

(iv) Combined Leverage

$$\begin{aligned} \text{Combined Leverage} &= \frac{\text{Contribution}}{\text{EBIT}} \times \frac{\text{EBIT}}{\text{PBT}} \\ \text{Or,} &= \text{Operating Leverage} \times \text{Financial Leverage} \\ &= 1.296 \times 1.125 = 1.458 \end{aligned}$$

The combined leverage studies the choice of fixed cost in cost structure and choice of debt in capital structure. It studies how sensitive the change in EPS is vis-à-vis

change in sales. The leverages – operating, financial and combined are measures of risk.

Question 3

- (a) *M J Pvt. Ltd. produces a product "SKY" which passes through two processes, viz. Process-A and Process-B. The details for the year ending 31st March, 2014 are as follows:*

	Process A	Process - B
40,000 Units introduced at a cost of	₹ 3,60,000	-
Material Consumed	₹ 2,42,000	2,25,000
Direct Wages	₹ 2,58,000	1,90,000
Manufacturing Expenses	₹ 1,96,000	1,23,720
Output in Units	37,000	27,000
Normal Wastage of Input	5%	10%
Scrap Value (per unit)	₹ 15	20
Selling Price (per unit)	₹ 37	61

Additional Information:

- (a) 80% of the output of Process-A, was passed on to the next process and the balance was sold. The entire output of Process- B was sold.
 (b) Indirect expenses for the year was ₹ 4,48,080.
 (c) It is assumed that Process-A and Process-B are not responsibility centre.

Required:

- (i) Prepare Process-A and Process-B Account.
 (ii) Prepare Profit & Loss Account showing the net profit / net loss for the year.

(8 Marks)

- (b) *FH Hospital is considering to purchase a CT-Scan machine. Presently the hospital is outsourcing the CT -Scan Machine and is earning commission of ₹15,000 per month (net of tax). The following details are given regarding the machine:*

	₹
Cost of CT -Scan machine	15,00,000
Operating cost per annum (excluding Depreciation)	2,25,000
Expected revenue per annum	7,90,000
Salvage value of the machine (after 5 years)	3,00,000
Expected life of the machine	5 years

Assuming tax rate @ 30%, whether it would be profitable for the hospital to purchase the machine?

Give your recommendation under:

- (i) Net Present Value Method, and
(ii) Profitability Index Method.

PV factors at 12% are given below:

Year	1	2	3	4	5
PV factor	0.893	0.797	0.712	0.636	0.567

(8 Marks)

Answer

(a) (i)

Process- A Account

Particulars	Units	Amount (₹)	Particulars	Units	Amount (₹)
To Input	40,000	3,60,000	By Normal wastage (2,000 units × ₹ 15)	2,000	30,000
To Material	---	2,42,000	By Abnormal loss A/c (1,000 units × ₹ 27)	1,000	27,000
To Direct wages	---	2,58,000	By Process- B (29,600 units × ₹ 27)	29,600	7,99,200
To Manufacturing Exp.	---	1,96,000	By Profit & Loss A/c (7,400 units × ₹ 27)	7,400	1,99,800
	40,000	10,56,000		40,000	10,56,000

$$\text{Cost per unit} = \frac{\text{₹}10,56,000 - \text{₹}30,000}{40,000 \text{ units} - 2,000 \text{ units}} = \text{₹}27 \text{ per unit}$$

$$\text{Normal wastage} = 40,000 \text{ units} \times 5\% = 2,000 \text{ units}$$

$$\text{Abnormal loss} = 40,000 \text{ units} - (37,000 \text{ units} + 2,000 \text{ units}) = 1,000 \text{ units}$$

$$\text{Transfer to Process- B} = 37,000 \text{ units} \times 80\% = 29,600 \text{ units}$$

$$\text{Sale} = 37,000 \text{ units} \times 20\% = 7,400 \text{ units}$$

Process- B Account

Particulars	Units	Amount (₹)	Particulars	Units	Amount (₹)
To Process- A A/c	29,600	7,99,200	By Normal wastage (2,960 units × ₹ 20)	2,960	59,200

To Material	---	2,25,000	By Profit & Loss A/c (27,000 units × ₹ 48)	27,000	12,96,000
To Direct Wages	---	1,90,000			
To Manufacturing Exp.	---	1,23,720			
To Abnormal Gain A/c (360 units × ₹ 48)	360	17,280			
		29,960		29,960	13,55,200

$$\text{Cost per unit} = \frac{\text{₹}13,37,920 - \text{₹}59,200}{29,600 \text{ units} - 2,960 \text{ units}} = \text{₹} 48 \text{ per unit}$$

$$\text{Normal wastage} = 29,600 \text{ units} \times 10\% = 2,960 \text{ units}$$

$$\text{Abnormal gain} = (27,000 \text{ units} + 2,960 \text{ units}) - 29,600 \text{ units} = 360 \text{ units}$$

(ii)

Profit & Loss Account

Particulars	Amount (₹)	Particulars	Amount (₹)
To Process- A A/c	1,99,800	By Sales:	
To Process- B A/c	12,96,000	-Process-A	2,73,800
To Abnormal loss A/c	12,000	(7,400 units × ₹ 37)	
To Indirect Expenses	4,48,080	-Process- B	16,47,000
		(27,000 units × ₹ 61)	
		By Abnormal gain	10,080
		By Net loss	25,000
	19,55,880		19,55,880

Working Notes:

Normal wastage (Loss) Account

Particulars	Units	Amount (₹)	Particulars	Units	Amount (₹)
To Process- A A/c	2,000	30,000	By Abnormal Gain A/c (360 units × ₹ 20)	360	7,200
To Process- B A/c	2,960	59,200	By Bank (Sales)	4,600	82,000
	4,960	89,200		4,960	89,200

Abnormal Loss Account

Particulars	Units	Amount (₹)	Particulars	Units	Amount (₹)
To Process- A A/c	1,000	27,000	By Bank A/c (1,000 units × ₹ 15)	1,000	15,000

			By Profit & Loss A/c	---	12,000
	1,000	27,000		1,000	27,000

Abnormal Gain Account

Particulars	Units	Amount (₹)	Particulars	Units	Amount (₹)
To Normal loss A/c (360 units × ₹ 20)	360	7,200	By Process- B A/c	360	17,280
To Profit & Loss A/c		10,080			
	360	17,280		360	17,280

(b) Advise to the Hospital Management

Determination of Cash inflows	₹
Sales Revenue	7,90,000
Less: Operating Cost	<u>2,25,000</u>
	5,65,000
Less: Depreciation (15,00,000 – 3,00,000)/5	<u>2,40,000</u>
Net Income	3,25,000
Tax @ 30%	<u>97,500</u>
Earnings after Tax (EAT)	2,27,500
Add: Depreciation	<u>2,40,000</u>
Cash inflow after tax per annum	4,67,500
Less: Loss of Commission Income	<u>1,80,000</u>
Net Cash inflow after tax per annum	2,87,500
In 5 th Year :	
New Cash inflow after tax	2,87,500
Add: Salvage Value of Machine	<u>3,00,000</u>
Net Cash inflow in year 5	<u>5,87,500</u>

Calculation of Net Present Value (NPV)

Year	CFAT	PV Factor @10%	Present Value of Cash inflows
1 to 4	2,87,500	3.038	8,73,425.00
5	5,87,500	0.567	<u>3,33,112.50</u>
			12,06,537.50
Less: Cash Outflows			<u>15,00,000.00</u>
	NPV		<u>(2,93,462.50)</u>

$$\text{Profitability Index} = \frac{\text{Sum of discounted cash inflows}}{\text{Present value of cash outflows}} = \frac{12,06,537.50}{15,00,000} = 0.804$$

Advise: Since the net present value is negative and profitability index is also less than 1, therefore, the hospital should not purchase the CT-Scan machine.

Question 4

(a) XYZ Co. Ltd. provides the following information:

	Standard	Actual
Production	4,000 Units	3,800 Units
Working Days	20	21
Fixed Overhead	₹ 40,000	₹ 39,000
Variable Overhead	₹ 12,000	₹ 12,000

You are required to calculate following overhead variances:

(a) Variable Overhead Variance

(b) Fixed Overhead Variances

(i) Expenditure Variance

(ii) Volume Variance

(8 Marks)

(b) The Balance Sheets of Z Ltd. as on 31st March, 2013 and 31st March, 2014 are as under:

Liabilities	2013	2014	Assets	2013	2014
	₹	₹		₹	₹
Equity share capital	15,00,000	20,00,000	Goodwill	5,75,000	4,50,000
12% Redeemable pref. share cap.	7,50,000	5,00,000	Land & Building	10,00,000	8,50,000
General Reserve	2,00,000	3,50,000	Plant	4,00,000	10,00,000
Profit & Loss A/c	1,50,000	2,40,000	Debtors	8,00,000	12,60,000
Creditors	2,75,000	4,15,000	Stock	4,85,000	4,35,000
Outstanding Expenses	1,00,000	80,000	Marketable Securities	75,000	50,000
Provision for Tax	2,00,000	2,50,000	Cash and Bank	50,000	40,000
Proposed Dividend	2,10,000	2,50,000			
	33,85,000	40,85,000		33,85,000	40,85,000

Additional Information:

(i) Depreciation charged on Plant and Land & Buildings during the year was ₹ 50,000 and ₹ 1,00,000 respectively.

(ii) Income-Tax ₹ 1,75,000 was paid during the year 2013-14.

(iii) An Interim Dividend of ₹ 1,00,000 has been paid in 2013-14.

Prepare Cash Flow Statement.

(8 Marks)

Answer

(a) Workings:

$$\text{Standard Variable Overhead rate per unit} = \frac{\text{₹ 12,000}}{4,000 \text{ units}} = \text{₹ 3}$$

$$\text{Standard Fixed Overhead rate per unit} = \frac{\text{₹ 40,000}}{4,000 \text{ units}} = \text{₹ 10}$$

$$\begin{aligned} \text{(a) Variable Overhead Variance} &= \text{Recovered Variable Overhead} - \text{Actual Variable overhead} \\ &= 3,800 \text{ units} \times \text{₹ 3} - \text{₹ 12,000} \\ &= \text{₹ 11,400} - \text{₹ 12,000} = \text{₹ 600 (Adverse)} \end{aligned}$$

$$\begin{aligned} \text{(b) (i) Fixed Overhead Expenditure Variance} &= \text{Budgeted Overhead} - \text{Actual Overhead} \\ &= \text{₹ 40,000} - \text{₹ 39,000} \\ &= \text{₹ 1,000 (Favourable)} \end{aligned}$$

$$\begin{aligned} \text{(ii) Fixed Overhead Volume Variance} &= \text{Recovered Overhead} - \text{Budgeted Overhead} \\ &= 3,800 \text{ units} \times \text{₹ 10} - \text{₹ 40,000} \\ &= \text{₹ 38,000} - \text{₹ 40,000} \\ &= \text{₹ 2,000 (Adverse)} \end{aligned}$$

(b) Cash Flow Statement for the year ending 31st March, 2014

	₹	₹
A. Cash flow from Operating Activities		
Profit and Loss A/c as on 31.3.2014		2,40,000
Less: Profit and Loss A/c as on 31.3.2013		<u>(1,50,000)</u>
		90,000
Add: Transfer to General Reserve	1,50,000	
Provision for Tax	2,25,000	
Interim Dividend paid during the year	1,00,000	
Proposed Dividend	<u>2,50,000</u>	<u>7,25,000</u>
Profit before Tax		8,15,000
Adjustment for Depreciation:		
Land and Building	1,00,000	

Plant and Machinery	50,000	1,50,000
Goodwill written off		<u>1,25,000</u>
Operating Profit before Working Capital Changes		10,90,000
Adjustment for Working Capital Changes:		
Decrease in Outstanding Expenses	(20,000)	
Decrease in Stock	50,000	
Increase in Debtors	(4,60,000)	
Increase in Creditors	<u>1,40,000</u>	<u>(2,90,000)</u>
Cash generated from Operations		8,00,000
Income tax paid		<u>(1,75,000)</u>
Net Cash Inflow from Operating Activities (a)		<u>6,25,000</u>
B. Cash flow from Investing Activities		
Proceeds from Sale of Building		50,000
Purchase of Plant and Machinery		<u>(6,50,000)</u>
Net Cash Outflow from Investing Activities (b)		<u>(6,00,000)</u>
C. Cash Flow from Financing Activities		
Proceeds from Issuance of Share Capital		5,00,000
Redemption of Preference Shares		(2,50,000)
Interim Dividend Paid		(1,00,000)
Final Dividend Paid		<u>(2,10,000)</u>
Net Cash Outflow from Financing Activities (c)		<u>(60,000)</u>
Net increase in Cash and Cash Equivalents during the year (a+b+c)		(35,000)
Cash and Cash Equivalents at the beginning of the year (Cash and Bank and Marketable Securities)		<u>1,25,000</u>
Cash and Cash Equivalents at the end of the year		<u>90,000</u>

Working Notes:1. **Provision for the Tax Account**

		₹			₹
To	Bank (paid)	1,75,000	By	Balance b/d	2,00,000
To	Balance c/d	2,50,000	By	Profit and Loss a/c	2,25,000
		<u>4,25,000</u>			<u>4,25,000</u>

2. **Plant and Machinery Account**

		₹			₹
To	Balance b/d	4,00,000	By	Depreciation	50,000

To	Bank a/c (Purchases) (Balancing figure)	6,50,000	By	Balance c/d	10,00,000
		10,50,000			10,50,000

3. **Land and Building Account**

		₹			₹
To	Balance b/d	10,00,000	By	Depreciation	1,00,000
			By	Bank a/c (Sales) (Balancing figure)	50,000
			By	Balance c/d	8,50,000
		10,00,000			10,00,000

(Note: In the above solution it has been assumed that marketable securities have insignificant risk of changes in value.)

Question 5

- Distinguish between cost control and cost reduction.
- Explain the following:
 - Explicit costs
 - Engineered costs
- Discuss emerging issues affecting the future role of Chief Financial Officer (CFO).
- State the main features of Global Depository Receipts (GDRs) and American Depository Receipts (ADRs).
(4 × 4 = 16 Marks)

Answer

(a) Difference between Cost Control and Cost Reduction

Cost Control	Cost Reduction
1. Cost control aims at maintaining the costs in accordance with the established standards.	1. Cost reduction is concerned with reducing costs. It challenges all standards and endeavours to better them continuously
2. Cost control seeks to attain lowest possible cost under existing conditions.	2. Cost reduction recognises no condition as permanent, since a change will result in lower cost.
3. In case of Cost Control, emphasis is on past and present	3. In case of cost reduction it is on present and future.

4. Cost Control is a preventive function	4. Cost reduction is a corrective function. It operates even when an efficient cost control system exists.
5. Cost control ends when targets are achieved	5. Cost reduction has no visible end.

- (b) (i) **Explicit Costs** - These costs are also known as out of pocket costs and refer to costs involving immediate payment of cash. Salaries, wages, postage and telegram, printing and stationery, interest on loan etc. are some examples of explicit costs involving immediate cash payment.
- (ii) **Engineered Costs** - These are costs that result specifically from a clear cause and effect relationship between inputs and outputs. The relationship is usually personally observable. Examples of inputs are direct material costs, direct labour costs etc.
- (c) **Emerging Issues/Priorities Affecting the Future Role of Chief Financial Officer (CFO)**
- (i) **Regulation:** Regulation requirements are increasing and CFOs have an increasingly personal stake in regulatory adherence.
- (ii) **Globalisation:** The challenges of globalisation are creating a need for finance leaders to develop a finance function that works effectively on the global stage and that embraces diversity.
- (iii) **Technology:** Technology is evolving very quickly, providing the potential for CFOs to reconfigure finance processes and drive business insight through 'big data' and analytics.
- (iv) **Risk:** The nature of the risks that organisations face is changing, requiring more effective risk management approaches and increasingly CFOs have a role to play in ensuring an appropriate corporate ethos.
- (v) **Transformation:** There will be more pressure on CFOs to transform their finance functions to drive a better service to the business at zero cost impact.
- (vi) **Stakeholder Management:** Stakeholder management and relationships will become important as increasingly CFOs become the face of the corporate brand.
- (vii) **Strategy:** There will be a greater role to play in strategy validation and execution, because the environment is more complex and quick changing, calling on the analytical skills CFOs can bring.
- (viii) **Reporting:** Reporting requirements will broaden and continue to be burdensome for CFOs.
- (ix) **Talent and Capability:** A brighter spotlight will shine on talent, capability and behaviours in the top finance role.
- (Note: Students may answer any four of the above issues)

(d) Global Depository Receipts and American Depository Receipts

Global Depository Receipts (GDRs) are basically negotiable certificates denominated in US dollars that represent a non-US company's publicly traded local currency equity shares. These are created when the local currency shares of Indian company are delivered to the depository's local custodian bank, against which the depository bank issues Depository Receipts in US dollars.

American Depository Receipts (ADRs) are securities offered by non-US companies who want to list on any of the US exchange. Each ADR represents a certain number of a company's regular shares. ADRs allow US investors to buy shares of these companies without the costs of investing directly in a foreign stock exchange. ADRs are issued by an approved New York bank or trust company against the deposit of the original shares. These are deposited in a custodial account in the US. Such receipts have to be issued in accordance with the provisions stipulated by the SEC USA which are very stringent.

Question 6

- (a) *M/s ABID Constructions undertook a contract at a price of ₹ 171.00 lacs. The relevant data for the year ended 31st March, 2014 are as under:*

	(₹000)
Material issued at site	7700
Direct Wages paid	3300
Site office cost	550
Material return to store	175
Work certified	12650
Work uncertified	225
Progress Payment Received	10120
Prepaid site office cost as on 31-03-2014	50
Direct wages outstanding as on 31-03-2014	100
Material at site as on 31-03-2014	110

Additional Information:

- (a) A plant was purchased for the contract at ₹ 8,00,000 on 01-12-2013.
 (b) Depreciation @ 15% per annum is to be charged.
 (c) Material which cost ₹ 1,30,000 was destroyed by fire.

Prepare:

- (i) Contract Account for the year ended 31st March, 2014 and compute the profit to be taken to the Profit & Loss Account.
 (ii) Account of Contractee.
 (iii) Profit & Loss Account showing the relevant items.

(iv) Balance Sheet showing the relevant items.

(8 Marks)

(b) Black Limited has furnished the following cost sheet:

	₹ / Per Unit
Raw Material	98
Direct Labour	53
Factory Overhead (Includes depreciation of ₹ 15 per unit at budgeted level of activity)	<u>88</u>
Total Cost	239
Profit	<u>43</u>
Selling Price	<u>282</u>

Additional Information:

(i)	Average raw material in stock	3 weeks
(ii)	Average work-in-progress (% of completion with respect to Material- 75% Labour & Overhead - 70%)	2 weeks
(iii)	Finished goods in stock	4 weeks
(iv)	Credit allowed to debtors	2½ weeks
(v)	Credit allowed by creditors	3½ weeks
(vi)	Time lag in payments of labour	2 weeks
(vii)	Time lag in payments of factory overheads	1½ weeks
(viii)	Company sells, 25% of the output against cash	
(ix)	Cash in hand and bank is desired to be maintained	₹ 2,25,000
(x)	Provision for contingencies is required @ 4% of working capital requirement including that provision.	

You may assume that production is carried on evenly throughout the year and labour and factory overheads accrue similarly.

You are required to prepare a statement showing estimate of working capital needed to finance a budgeted activity level of 1,04,000 units of production. Finished stock, debtors and overhead are taken at cash cost. (8 Marks)

Answer

(a) (i) **M/s ABID Constructions**

Contract Account

Particulars	Amount (₹ in '000)	Particulars	Amount (₹ in '000)
To Material issued	7,700	By Material returned	175

To Direct wages	3,300		By Profit & Loss A/c (Material Destroyed by fire)		130
Add: Outstanding	100	3,400	By W-I-P:		
To Site Office Cost	550		- Work uncertified	225	
Less: Prepaid	50	500	- Work certified	12,650	12,875
To Depreciation*		40	By Material at site		110
To Notional Profit		1,650			
		13,290			13,290
To Profit & Loss A/c (Working Note -2)		880	By Notional Profit		1,650
To W-I-P (Reserve)		770			
		1,650			1,650

$$* \text{ Depreciation on plant} = ₹ 8,00,000 \times 15\% \times \frac{4 \text{ months}}{12 \text{ months}} = ₹ 40,000$$

(ii) **Contractee's Account**

Particulars	Amount (₹ in '000)	Particulars	Amount (₹ in '000)
To Balance c/d	10,120	By Bank A/c	10,120
	10,120		10,120

(iii) **Relevant items of Profit & Loss Account**

Particulars	Amount (₹ in '000)	Particulars	Amount (₹ in '000)
To Contract A/c (loss of material due to fire)	130	By Contract A/c (Profit on contract)	880
To Net Profit	750		
	880		880

(iv) **Balance Sheet (Extracts) as on 31st March, 2014**

(Amount in '000)

Liabilities	Amount (₹)	Amount (₹)	Assets	Amount (₹)	Amount (₹)
Add: Profit	750		Plant at cost	800	
			Less: Dep.	40	760
			Contract W-I-P:		

Outstanding Wages	100	-Uncertified	225	
		-Certified	12,650	
		-Reserve	(770)	
		Less: Advances	(10,120)	1,985
		Materials at site		110
		Prepaid exp.		50

Working Notes:

$$\begin{aligned}
 1. \quad \text{Percentage of Completion} &= \frac{\text{Work Certified}}{\text{Value of ontract}} \times 100 \\
 &= \frac{\text{₹ } 1,26,50,000}{\text{₹ } 1,71,00,000} \times 100 \\
 &= 73.98\%
 \end{aligned}$$

$$2. \quad \text{Profit from the incomplete contract}$$

$$\begin{aligned}
 &= \text{Notional Profit} \times \frac{2}{3} \times \frac{\text{Cash Re ceived}}{\text{Work Certified}} \\
 &= \text{₹ } 16,50,000 \times \frac{2}{3} \times \frac{\text{₹ } 1,01,20,000}{\text{₹ } 1,26,50,000} \\
 &= \text{₹ } 8,80,000
 \end{aligned}$$

(Note: The above figures calculated on traditional prudent basis followed in Contract costing.)

(b) Statement of Estimation of Working Capital Needs

Current Assets		₹
I	Investment in Inventory	
(i)	Raw material Inventory = $1,04,000 \times \frac{3}{52} \times \text{₹ } 98$	5,88,000
(ii)	Work-in-Process Inventory	
	Material = $1,04,000 \times \frac{2}{52} \times 0.75 \times 98 = 2,94,000$	
	Labour and Overheads Cost (other than depreciation)	
	= $1,04,000 \times \frac{2}{52} \times 0.70 \times 126 = 3,52,800$	6,46,800

	(iii) Finished Goods Inventory (Cash Cost)	
	$= 1,04,000 \times \frac{4}{52} \times 224$	17,92,000
II	Investment in Debtors (Cash Cost)	8,40,000
	$= 1,04,000 \times \frac{2.5}{52} \times 0.75 \times 224$	
III	Cash Balance	<u>2,25,000</u>
	Investment in Current Assets	<u>40,91,800</u>

Current Liabilities and Deferred Payment		₹
(i)	Creditors = $1,04,000 \times \frac{3.5}{52} \times 98$	6,86,000
(ii)	Wages outstanding = $1,04,000 \times \frac{2}{52} \times 53$	2,12,000
(iii)	Overheads outstanding (cash cost) = $1,04,000 \times \frac{1.5}{52} \times 73$	<u>2,19,000</u>
	Total Deferred Payments	<u>11,17,000</u>
	Net Working Capital (Current assets – Non-interest bearing current liabilities) = 40,91,800 – 11,17,000	29,74,800
	Add: Provision for Contingencies @ 4 percent (₹ 29,74,800 × 1/24)	<u>1,23,950</u>
	Working Capital Requirement including Provision	<u>30,98,750</u>

(Note: For calculation purpose, 4 weeks maybe taken as equivalent to a month and 52 weeks in a year.)

Question 7

Answer any **four** of the following:

- Distinguish between allocation and apportionment of cost.
- Describe the salient features of budget manual.
- Explain the following:
 - Concentration Banking
 - Lock Box System
- Comment on the Debt Service Coverage Ratio.

- (e) (i) Name any four financial instruments, which are related to international financial market.
- (ii) State the unit of cost for the followings:
- (1) Transport
 - (2) Power
 - (3) Hotel
 - (4) Hospital
- (4 x 4 = 16 Marks)

Answer**(a) Distinguish between allocation and apportionment of cost.**

Cost allocation: The term 'allocation' refers to assignment or allotment of an entire item of cost to a particular cost centre or cost unit. It implies relating overheads directly to the various departments. The estimated amount of various items of manufacturing overheads should be allocated to various cost centres or departments. For example- if a separate power meter has been installed for a department, the entire power cost ascertained from the meter is allocated to that department.

Cost apportionment: There are some items of estimated overheads (like the salary of the works manager) which cannot be directly allocated to the various departments and cost centres. Such unallocable expenses are to be spread over the various departments or cost centres on an appropriate basis. This is called apportionment.

(b) Salient features of Budget Manual

- Budget manual contains many information which are required for effective budgetary planning.
- A budget manual is a collection of documents that contains key information for those involved in the planning process.
- An introductory explanation of the budgetary planning and control process, including a statement of the budgetary objective and desired results is included in Budget Manual
- Budget Manual contains a form of organisation chart to show who is responsible for the preparation of each functional budget and the way in which the budgets are interrelated.
- It contains a timetable for the preparation of each budget.
- Copies of all forms to be completed by those responsible for preparing budgets, with explanations concerning their completion is included in Budget Manual.

- (c) (i) **Concentration Banking:** In concentration banking the company establishes a number of strategic collection centres in different regions instead of a single collection centre at the head office. This system reduces the period between the time a customer mails in his remittances and the time when they become spendable funds with the company. Payments received by the different collection centers are deposited with their respective local banks which in turn transfer all surplus funds to the concentration bank of head office.
- (ii) **Lock Box System:** Another means to accelerate the flow of funds is a lock box system. The purpose of lock box system is to eliminate the time between the receipts of remittances by the company and deposited in the bank. A lock box arrangement usually is on regional basis which a company chooses according to its billing patterns.

(d) **Comment on Debt Service Coverage Ratio (DSCR)**

Debt service coverage ratio indicates the capacity of a firm to service a particular level of debt i.e. repayment of principal and interest. High credit rating firms target DSCR to be greater than 2 in its entire loan life. High DSCR facilitates the firm to borrow at the most competitive rates. Lenders are interested in this ratio to judge the firm's ability to pay off current interest and installments.

The debt service coverage ratio can be calculated as under:

$$\text{Debt Service Coverage Ratio} = \frac{\text{Earnings available for debt service}}{\text{Interest} + \text{Installments}}$$

$$\text{Or, Debt Service Coverage Ratio} = \frac{\text{EBITDA}}{\text{Interest} + \frac{\text{Principal Repayment Due}}{1 - T_c}}$$

(e) (i) **Financial Instruments in the International Market**

Some of the various financial instruments dealt with in the international market are:

- (a) Euro Bonds
- (b) Foreign Bonds
- (c) Fully Hedged Bonds
- (d) Medium Term Notes
- (e) Floating Rate Notes
- (f) External Commercial Borrowings
- (g) Foreign Currency Futures

(h) Foreign Currency Option

(i) Euro Commercial Papers.

(**Note:** Students may answer any four of the above financial instruments)

(ii)

Industry	Unit of Cost
1. Transport	Per passenger k.m. or per tonne k.m.
2. Power	Per Kilo – watt (kw) hour
3. Hotel	Per room day / or per meal
4. Hospital	Per Patient – day / or per bed/day