Roll No. .....

INTERMEDIATE (IPC)
GROUP I - PAPER 3
COST ACCOUNTING
& FINANCIAL MANAGEMENT

NOV 2014

Total No. of Questions – 7 Total No. of Printed Pages – **22**

Time Allowed – **3** Hours Maximum Marks – **100**

KVB-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) Following details are related to a manufacturing concern :

Re-order Level	– 160000 units
Economic Order Quantity	– 90000 units
Minimum Stock Level	– 100000 units
Maximum Stock level	– 190000 units
Average Lead time	– 6 days
Difference between Minimum lead time and Maximum lead time	– 4 days

Calculate :

(i) Maximum consumption per day

(ii) Minimum consumption per day

Marks

(b) Zed Limited sells its product at ₹ 30 per unit. During the quarter ending on 31st March, 2014, it produced and sold 16000 units and suffered a loss of ₹ 10 per unit. If the volume of sales is raised to 40000 units, it can earn a profit of ₹ 8 per unit.

You are required to calculate :

(i) Break Even Point in Rupees.

(ii) Profit if the sale volume is 50000 units.

(iii) Minimum level of production where the company needs not to close the production if unavoidable fixed cost is ₹ 1,50,000.

(c) Alpha Limited requires funds amounting to ₹ 80 lakhs for its new project. To raise the funds, the company has following two alternatives :

(i) to issue Equity Shares (at par) amounting to ₹ 60 lakhs and borrow the balance amount at the interest of 12% p.a.; or

(ii) to issue Equity Shares (at par) and 12% Debentures in equal proportion.

The Income-tax rate is 30%.

Find out the point of indifference between the available two modes of financing and state which option will be beneficial in different situations.

Marks

(d) 'A' Ltd. and 'B' Ltd. are identical in every respect except capital structure. 'A' Ltd. does not employ debts in its capital structure whereas 'B' Ltd. employs 12% Debentures amounting to ₹ 10 lakhs. Assuming that :

(i) All assumptions of M-M model are met.

(ii) Income-tax rate is 30%;

(iii) EBIT is ₹ 2,50,000 and

(iv) The Equity capitalization rate of 'A' Ltd. is 20%.

Calculate the value of both the companies and also find out the Weighted Average Cost of Capital for both the companies.

2. (a) Z Limited obtained a contract No. 999 for ₹ 50 lacs. The following details are available in respect of this contract for the year ended March 31, 2014 : 8

	₹
Materials purchased	1,60,000
Materials issued from stores	5,00,000
Wages and salaries paid	7,00,000
Drawing and maps	60,000
Sundry expenses	15,000
Electricity charges	25,000
Plant hire expenses	60,000
Sub-contract cost	20,000
Materials returned to stores	30,000
Materials returned to suppliers	20,000

Marks

The following balances relating to the contract No. 999 for the year ended on March 31, 2013 and March 31, 2014 are available :

	as on 31st March, 2013	as on 31st March, 2014
	₹	₹
Work certified	12,00,000	35,00,000
Work uncertified	20,000	40,000
Materials at site	15,000	30,000
Wages outstanding	10,000	20,000

The contractor receives 75% of work certified in cash.

Prepare Contract Account and Contractee's Account.

(b) Balance Sheets of Star Ltd. are as under : 8

Balance Sheet

(in lakh ₹)

Liabilities	31/03/13 ₹	31/03/14 ₹	Assets	31/03/13 ₹	31/03/14 ₹
Share Capital	24.00	30.00	Plant & Machinery	15.00	21.00
Reserve	4.50	6.00	Buildings	12.00	18.00
Profit & Loss A/c.	1.80	3.00	Investments	–	3.00
Debentures	–	6.00	Sundry Debtors	21.00	15.00
Provision for Taxation	2.10	3.00	Stock	6.00	12.00
Proposed Dividend	3.00	6.00	Cash in hand/Bank	6.00	6.00
Sundry Creditors	24.60	21.00			
Total	**60.00**	**75.00**	**Total**	**60.00**	**75.00**

Marks

With the help of following additional information, prepare Cash Flow Statement :

(i) Depreciation on plant and machinery was charged @ 25% on its opening balance and on building @ 10% on its opening balance.

(ii) During the year an old machine costing ₹ 1,50,000 (written down value ₹ 60,000) was sold for ₹ 1,05,000.

(iii) ₹ 1,50,000 was paid towards Income-tax, during the year.

3. (a) RST Limited is presently operating at 50% capacity and producing 30000 units. The entire output is sold at a price of ₹ 200 per unit. The cost structure at the 50% level of activity is as under : 8

	₹
Direct Material	75 per unit
Direct Wages	25 per unit
Variable Overheads	25 per unit
Direct Expenses	15 per unit
Factory Expenses (25% fixed)	20 per unit
Selling and Distribution Exp. (80% variable)	10 per unit
Office and Administrative Exp. (100% fixed)	5 per unit

The company anticipates that the variable costs will go up by 10% and fixed costs will go up by 15%.

You are required to prepare an Expense budget, on the basis of marginal cost for the company at 50% and 60% level of activity and find out the profits at respective levels.

Marks

(b) From the following information, prepare Balance Sheet of a firm : 8

Stock Turnover Ratio (based on cost of goods sold)	–	7 times
Rate of Gross Profit to Sales	–	25%
Sales to Fixed Assets	–	2 times
Average debt collection period	–	1.5 months
Current Ratio	–	2
Liquidity Ratio	–	1.25
Net Working Capital –		₹ 8,00,000
Net Worth to Fixed Assets	–	0.9 times
Reserve and Surplus to Capital	–	0.25 times
Long Term Debts	–	Nil

All Sales are on credit basis

4. (a) Following information have been extracted from the cost records of XYZ Pvt. Ltd : 8

Stores :	₹
• Opening balance	54,000
• Purchases	2,88,000
• Transfer from WIP	1,44,000
• Issue to WIP	2,88,000
• Issue for repairs	36,000
• Deficiency found in stock	10,800

Marks

Work-in-Progress : ₹

- Opening balance 1,08,000
- Direct wages applied 1,08,000
- Overheads charged 4,32,000
- Closing balance 72,000

Finished Production :

- Entire production is sold at a profit of 15% on cost at WIP
- Wages paid 1,26,000
- Overheads incurred 4,50,000

Draw the Stores Ledger Control Account, Work-in-Progress Control Account, Overheads Control Account and Costing Profit and Loss Account.

(b) The Capital structure of RST Ltd. is as follows : 8

	₹
Equity Share of ₹ 10 each	8,00,000
10% Preference Share of ₹ 100 each	5,00,000
12% Debentures of ₹ 100 each	7,00,000
	20,00,000

Marks

Additional Information :

- Profit after tax (Tax Rate 30%) are ₹ 2,80,000
- Operating Expenses (including Depreciation ₹ 96,800) are 1.5 times of EBIT
- Equity Dividend paid is 15%
- Market price of Equity Share is ₹ 23

Calculate :

(i) Operating and Financial Leverage

(ii) Cover for preference and equity dividend

(iii) The Earning Yield Ratio and Price Earning Ratio

(iv) The Net Fund Flow

Note : All operating expenses (excluding depreciation) are variable.

5. (a) Identify the methods of costing for the following : **4×4 =16**

(i) Where all costs are directly charged to a specific job.

(ii) Where all costs are directly charged to a group of products.

(iii) Where cost is ascertained for a single product.

(iv) Where the nature of the product is complex and method can not be ascertained.

Marks

(b) Explain the treatment of over and under absorption of overheads in cost accounts.

(c) Explain four kinds of float with reference to management of cash.

(d) Distinguish between 'Operating Lease' and 'Financial Lease'.

6. (a) PQR Ltd. having an annual sales of ₹ 30 lakhs, is re-considering its present collection policy. At present, the average collection period is 50 days and the bad debt losses are 5% of sales. The company is incurring an expenditure of ₹ 30,000 on account of collection of receivables. 8

The alternative policies are as under :

	Alternative I	**Alternative II**
Average Collection Period	40 days	30 days
Bad Debt Losses	4% of sales	3% of sales
Collection Expenses	₹ 60,000	₹ 95,000

Evaluate the alternatives on the basis of incremental approach and state which alternative is more beneficial.

Marks

(b) The following information relate to Process A : 8

(i)	Opening Work-in-Progress	8,000 units at ₹ 75,000
	Degree of Completion :	
	Material	100%
	Labour and Overhead	60%
(ii)	Input 1,82,000 units at	₹ 7,37,500
(iii)	Wages paid	₹ 3,40,600
(iv)	Overheads paid	₹ 1,70,300
(v)	Units scrapped	14,000
	Degree of Completion :	
	Material	100%
	Wages and Overheads	80%
(vi)	Closing Work-in-Progress	18,000 units
	Degree of Completion :	
	Material	100%
	Wages and Overheads	70%

(vii) Units completed and transferred 1,58,000 to next process

(viii) Normal loss 5% of total input including opening WIP

(ix) Scrap value is ₹ 5 per unit to be adjusted out of direct material cost

You are required to compute on the basis of FIFO basis :

(i) Equivalent Production

(ii) Cost Per Unit

(iii) Value of Units transferred to next process.

Marks

7. Answer any **four** of the following : **4×4 =16**

(a) Why money in the future is worth less than similar money today ? Give the reasons and explain.

(b) Distinguish between 'Business Risk' and 'Financial Risk'.

(c) What is 'Internal Rate of Return' ? Explain.

(d) State the different types of Packing Credit.

(e) Define 'Labour Turnover'. How is it measured ? Explain.

(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 **छ:** प्रश्नों में से किन्हीं **पाँच** प्रश्नों के उत्तर दीजिये ।

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

Marks

1. निम्नलिखित के उत्तर दीजिए : **4×5 =20**

(अ) निम्नलिखित विवरण एक निर्मात्री संस्था से संबंधित हैं :

पुन:आदेश स्तर	– 160000 इकाइयाँ
आर्थिक आदेश मात्रा	– 90000 इकाइयाँ
न्यूनतम रहतिया स्तर	– 100000 इकाइयाँ
अधिकतम रहतिया स्तर	– 190000 इकाइयाँ
औसत अग्रता समय	– 6 दिन
न्यूनतम अग्रता समय और अधिकतम अग्रता समय के मध्य अंतर	– 4 दिन

गणना कीजिए :

(i) प्रति दिन सामग्री का अधिकतम उपभोग

(ii) प्रति दिन सामग्री का न्यूनतम उपभोग

Marks

(ब) 'जेड' लिमिटेड अपने उत्पाद का विक्रय ₹ 30 प्रति इकाई पर करती है । 31 मार्च, 2014 को समाप्त होने वाली तिमाही में कम्पनी ने 16000 इकाइयों का उत्पादन एवं विक्रय किया तथा उसे ₹ 10 प्रति इकाई की हानि हुई । यदि विक्रय की मात्रा 40000 इकाई तक बढ़ा दी जाये, तो कम्पनी ₹ 8 प्रति इकाई के लाभ को अर्जित कर सकती है ।

आपसे अपेक्षित है कि निम्नलिखित की गणना कीजिए :

(i) सम-विच्छेद बिंदु (रुपये में)

(ii) लाभ की राशि जब विक्रय की मात्रा 50000 इकाई हो

(iii) यदि अपरिहार्य स्थायी लागतें (unavoidable fixed cost) ₹ 1,50,000 हों, तो उत्पादन की न्यूनतम मात्रा जहाँ तक कम्पनी उत्पादन कर सकती है ।

(स) अल्फा लिमिटेड को अपने नये प्रोजेक्ट के लिए ₹ 80 लाख के कोष की आवश्यकता है । कोष को प्राप्त करने के लिए कम्पनी के पास निम्नलिखित दो विकल्प उपलब्ध हैं :

(i) ₹ 60 लाख के समता अंशों का सममूल्य पर निर्गम तथा शेष धन राशि को 12% वार्षिक ब्याज दर पर उधार लेना; अथवा

(ii) समता अंशों का सममूल्य पर और 12% ऋणपत्र का समानुपात में निर्गम

आयकर की दर 30% है ।

वित्तीयन के उपलब्ध दोनों विकल्पों के मध्य तटस्थता के बिंदु को ज्ञात कीजिए तथा विभिन्न स्थितियों में कौन सा विकल्प लाभकारी होगा, इसका उल्लेख कीजिए ।

Marks

(द) 'अ' लिमिटेड और 'ब' लिमिटेड, पूँजी संरचना को छोड़कर, हर मामलें में एक दूसरे के समान हैं । 'अ' लिमिटेड अपनी पूँजी संरचना में ऋणों का उपयोग नहीं करती है जबकि 'ब' लिमिटेड की पूँजी संरचना में ₹ 10 लाख के 12% ऋणपत्र सम्मिलित हैं । यह मानते हुए कि :

(i) M-M उपागम की सभी मान्यताऐ उपस्थित हैं;

(ii) आयकर की दर 30% है;

(iii) ब्याज एवं कर के पूर्व अर्जन ₹ 2,50,000 है तथा

(iv) 'अ' लिमिटेड की समता पूँजीकरण की दर 20% है ।

दोनों कम्पनियों के मूल्य की गणना कीजिए तथा उनकी पूँजी की भारित औसत लागत ज्ञात कीजिए ।

2. (अ) 'जेड' लिमिटेड ने एक ठेका संख्या 999 ₹ 50 लाख में प्राप्त किया । 31 मार्च, 2014 को समाप्त होने वाले वर्ष के लिए इस ठेके के संदर्भ में निम्नलिखित विवरण उपलब्ध हैं : 8

	₹
सामग्री का क्रय	1,60,000
स्टोर्स से निर्गत सामग्री	5,00,000
मज़दूरी और वेतन दत्त	7,00,000
आरेखण एवं मानचित्र	60,000
विविध व्यय	15,000
विद्युत प्रभार	25,000
संयंत्र किराया व्यय	60,000
उप-ठेका लागत	20,000
स्टोर्स को सामग्री वापस	30,000
आपूर्तिकर्ता को सामग्री वापस	20,000

Marks

इस ठेके के संदर्भ में 31 मार्च, 2013 और 31 मार्च, 2014 को समाप्त होने वाले वर्ष में निम्नलिखित शेष प्राप्त हैं :

	31 मार्च, 2013	31 मार्च, 2014
	₹	₹
कार्य-प्रमाणित	12,00,000	35,00,000
कार्य अप्रमाणित	20,000	40,000
कार्य-स्थल पर सामग्री	15,000	30,000
अदत्त मज़दूरी	10,000	20,000

ठेकेदार को प्रमाणित कार्य का 75% नकद प्राप्त हुआ ।

ठेका एवं ठेकेदार का खाता बनाइये ।

(ब) स्टार लिमिटेड के आर्थिक चिट्ठे निम्नवत् हैं : 8

आर्थिक चिट्ठा (लाख ₹ में)

दायित्व	31/03/13 ₹	31/03/14 ₹	सम्पत्तियाँ	31/03/13 ₹	31/03/14 ₹
अंश पूँजी	24.00	30.00	प्लांट एवं मशीनरी	15.00	21.00
संचित	4.50	6.00	भवन	12.00	18.00
लाभ-हानि खाता	1.80	3.00	विनियोग	–	3.00
ऋणपत्र	–	6.00	विविध देनदार	21.00	15.00
कर के लिए प्रावधान	2.10	3.00	रहतिया	6.00	12.00
प्रस्तावित लाभांश	3.00	6.00	हस्तगत / बैंक में रोकड़	6.00	6.00
विविध लेनदार	24.60	21.00			
योग	**60.00**	**75.00**	**योग**	**60.00**	**75.00**

Marks

निम्नलिखित अतिरिक्त सूचनाओं की सहायता से रोकड़ प्रवाह विवरण तैयार कीजिए :

(i) प्लांट एवं मशीनरी के प्रारम्भिक मूल्य पर 25% तथा भवन के प्रारम्भिक मूल्य पर 10% ह्रास प्रभारित किया गया ।

(ii) वर्ष के अन्तर्गत ₹ 1,50,000 की लागत की एक पुरानी मशीन (अपलिखित मूल्य ₹ 60,000) ₹ 1,05,000 में बेची गयी ।

(iii) वर्ष के अन्तर्गत ₹ 1,50,000 के आयकर का भुगतान किया गया ।

3. (अ) आर.एस.टी. लिमिटेड वर्तमान में 50% क्षमता पर कार्य कर रही है और 30000 इकाइयाँ उत्पादित कर रही है । सम्पूर्ण उत्पादन ₹ 200 प्रति इकाई की दर से बेचा जाता है । क्रियात्मकता के 50% स्तर पर लागत संरचना निम्नवत है : 8

	₹
प्रत्यक्ष सामग्री	75 प्रति इकाई
प्रत्यक्ष मज़दूरी	25 प्रति इकाई
परिवर्तनशील उपरिव्यय	25 प्रति इकाई
प्रत्यक्ष व्यय	15 प्रति इकाई
कारखाना व्यय (25% स्थायी)	20 प्रति इकाई
विक्रय एवं वितरण व्यय (80% परिवर्तनशील)	10 प्रति इकाई
कार्यालय एवं प्रशासनिक व्यय (100% स्थायी)	5 प्रति इकाई

कम्पनी का अनुमान है कि परिवर्तनशील लागतों में 10% और स्थायी लागतों में 15% की वृद्धि होगी ।

आपसे अपेक्षित है कि क्रियात्मकता के 50% और 60% के स्तर के लिए सीमान्त लागत के आधार पर कम्पनी का व्यय बजट तैयार कीजिए और संदर्भित स्तरों के लिए लाभ ज्ञात कीजिए ।

Marks

(ब) निम्नलिखित सूचनाओं से, फर्म का आर्थिक चिट्ठा तैयार कीजिए : 8

स्टाक आवर्त अनुपात	–	7 गुना
(बेचे गये माल की लागत पर आधारित)		
विक्रय पर सकल लाभ की दर	–	25%
विक्रय का स्थायी सम्पत्तियों पर अनुपात	–	2 गुना
औसत ऋण संग्रहण अवधि	–	1.5 माह
चालू अनुपात	–	2
तरलता अनुपात	–	1.25
शुद्ध कार्यशील पूँजी	–	₹ 8,00,000
नेट वर्थ का स्थायी सम्पत्तियों पर अनुपात	–	0.9 गुना
संचित एवं आधिक्य का पूँजी पर अनुपात	–	0.25 गुना
दीर्घकालीन दायित्व	–	शून्य

सभी विक्रय उधार विक्रय हैं ।

4. (अ) XYZ प्राइवेट लिमिटेड के लागत अभिलेखों से निम्न सूचनाएँ प्राप्त की गई हैं : 8

स्टोर्स :	₹
• प्रारम्भिक शेष	54,000
• क्रय	2,88,000
• चालू कार्य से हस्तांतरण	1,44,000
• चालू कार्य को निर्गमन	2,88,000
• मरम्मत हेतु निर्गमन	36,000
• स्टॉक में प्राप्त कमी	10,800

Marks

₹

चालू कार्य :

- प्रारम्भिक शेष 1,08,000
- लागू प्रत्यक्ष मज़दूरी 1,08,000
- उपरिव्यय प्रभारित 4,32,000
- अंतिम शेष 72,000

निर्मित माल :

- सम्पूर्ण उत्पादन चालू कार्य की लागत पर 15% लाभ के साथ बेचा जाता है ।
- मज़दूरी भुगतान 1,26,000
- उपरिव्यय भुगतान 4,50,000

स्टोर्स खाता-बही नियंत्रण खाता, निर्माणाधीन चालू कार्य नियंत्रण खाता, उपरिव्यय नियंत्रण खाता तथा लागत लाभ-हानि खाता तैयार कीजिए ।

(ब) RST लिमिटेड की पूँजी संरचना निम्नवत है : **8**

	₹
समता अंश (₹ 10 प्रत्येक)	8,00,000
10% पूर्वाधिकार अंश ₹ 100 प्रत्येक	5,00,000
12% ऋणपत्र ₹ 100 प्रत्येक	7,00,000
	20,00,000

Marks

अतिरिक्त सूचनाएँ :

- करोपरान्त लाभ (कर की दर 30%) ₹ 2,80,000 हैं ।
- संचालन व्यय (ह्रास ₹ 96,800 को सम्मिलित करते हुए) ब्याज और कर के पूर्व आय (EBIT) का 1.5 गुना हैं ।
- समता लाभांश का भुगतान 15% किया गया है ।
- समता अंशों का बाजार मूल्य ₹ 23 है ।

गणना कीजिए :

(i) परिचालन लीवरेज तथा वित्तीय लीवरेज

(ii) पूर्वाधिकार एवं समता लाभांश के लिए आच्छादन

(iii) अर्जन प्रतिफल अनुपात तथा मूल्य अर्जन अनुपात

(iv) शुद्ध कोष प्रवाह

नोट : सभी संचालन व्यय (ह्रास को छोड़कर) परिवर्तनशील हैं ।

5. (अ) निम्नलिखित के लिये लागत निर्धारण विधि की पहचान कीजिए : **4×4 =16**

(i) जहाँ सभी लागतें एक विशिष्ट उपकार्य पर प्रत्यक्ष रूप से प्रभारित की जाती हैं ।

(ii) जहाँ सभी लागतें उत्पादों के एक समूह पर प्रत्यक्ष रूप से प्रभारित की जाती हैं ।

Marks

(iii) जहाँ एक उत्पाद के लिए लागत का निर्धारण किया जाता है ।

(iv) जहाँ उत्पाद की प्रकृति जटिल हो और विधि का निर्धारण न किया जा सके ।

(ब) लागत लेखों में उपरिव्ययों के अल्प-शोषण एवं अधि-शोषण के उपचार को समझाइये ।

(स) रोकड़ प्रबंधन के संदर्भ में चार प्रकार के फ्लोट (float) समझाइये ।

(द) 'संचालन पट्टा' और 'वित्तीयन पट्टा' में अंतर कीजिए ।

6. (अ) PQR लिमिटेड, जिसका वार्षिक विक्रय ₹ 30 लाख है, अपनी वर्तमान संग्रहण नीति पर पुनर्विचार कर रही है । वर्तमान में, औसत संग्रहण अवधि 50 दिन तथा अशोध्य ऋण हानि विक्रय का 5% हैं । कम्पनी अपने प्राप्यों के संग्रहण के लिए ₹ 30,000 का व्यय कर रही है । 8

वैकल्पिक नीतियाँ निम्नवत हैं :

	विकल्प – I	**विकल्प – II**
औसत संग्रहण अवधि	40 दिन	30 दिन
अशोध्य ऋण हानियाँ	विक्रय का 4%	विक्रय का 3%
संग्रहण व्यय	₹ 60,000	₹ 95,000

वृद्धिपरक विधि के आधार पर विकल्पों का मूल्यांकन कीजिए और उल्लेख कीजिए कि कौन सा विकल्प अधिक लाभकारी है ।

Marks

(ब) निम्नलिखित सूचनाएँ प्रक्रिया 'अ' से संबंधित हैं : 8

(i) प्रारम्भिक चालू कार्य (WIP) 8,000 इकाइयाँ ₹ 75,000 पर

पूर्णता की श्रेणी :

सामग्री 100%

मज़दूरी व उपरिव्यय 60%

(ii) प्रयुक्त इकाइयाँ 1,82,000 ₹ 7,37,500 पर

(iii) मज़दूरी दत्त ₹ 3,40,600

(iv) उपरिव्यय दत्त ₹ 1,70,300

(v) इकाइयों का क्षय 14,000

पूर्णता की श्रेणी :

सामग्री 100%

मज़दूरी व उपरिव्यय 80%

(vi) अंतिम चालू कार्य 18,000 इकाइयाँ

पूर्णता की श्रेणी :

सामग्री 100%

मज़दूरी व उपरिव्यय 70%

(vii) निर्मित एवं अगली प्रक्रिया में हस्तांतरित – 1,58,000 इकाइयाँ

(viii) सामान्य क्षय – प्रारम्भिक चालू कार्य को कुल प्रयुक्त इकाइयों में सम्मिलित कर उसका 5%

(ix) क्षरित इकाइयों का मूल्य ₹ 5 प्रति इकाई की दर से प्रत्यक्ष सामग्री लागत के साथ समायोजित किया जाना है ।

आपसे अपेक्षित है कि पहले आना पहले जाना (FIFO) के आधार पर गणना कीजिए :

(i) समतुल्य उत्पादन

(ii) प्रति इकाई लागत

(iii) अगली प्रक्रिया में हस्तांतरित इकाइयों का मूल्य

Marks

7. निम्नलिखित में से किन्हीं **चार** के उत्तर दीजिए : **4×4 =16**

(अ) भविष्य की मुद्रा आज की उतनी ही मुद्रा से कम मूल्य क्यों रखती है ? कारणों का उल्लेख कीजिए और समझाइये ।

(ब) 'व्यापारिक जोखिम' और 'वित्तीय जोखिम' में अंतर कीजिए ।

(स) 'प्रत्याय की आंतरिक दर' क्या है ? समझाइये ।

(द) विभिन्न प्रकार की पैकिंग साख का उल्लेख कीजिए ।

(य) 'श्रम प्रत्यावर्तन' को परिभाषित कीजिए । यह किस प्रकार मापित की जाती है ? समझाइये ।

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PAPER – 3: COST ACCOUNTING AND FINANCIAL MANAGEMENT

*Question No. **1** is compulsory.*

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

Working notes should form part of the answers.

Question 1

Answer the following:

(a) Following details are related to a manufacturing concern:

Re-order Level	*1,60,000 units*
Economic Order Quantity	*90,000 units*
Minimum Stock Level	*1,00,000 units*
Maximum Stock Level	*1,90,000 units*
Average Lead Time	*6 days*
Difference between minimum lead time and Maximum lead time	*4 days*

Calculate:

(i) Maximum consumption per day

(ii) Minimum consumption per day

(b) Zed Limited sells its product at ₹ 30 per unit. During the quarter ending on 31st March, 2014, it produced and sold 16,000 units and suffered a loss of ₹ 10 per unit. If the volume of sales is raised to 40,000 units, it can earn a profit of ₹ 8 per unit.

You are required to calculate:

(i) Break Even Point in Rupees.

(ii) Profit if the sale volume is 50,000 units.

(iii) Minimum level of production where the company needs not to close the production if unavoidable fixed cost is ₹ 1,50,000.

(c) Alpha Limited requires funds amounting to ₹ 80 lakhs for its new project. To raise the funds, the company has following two alternatives:

(i) to issue Equity Shares (at par) amounting to ₹ 60 lakhs and borrow the balance amount at the interest of 12% p.a.; or

(ii) to issue Equity Shares (at par) and 12% Debentures in equal proportion.

The Income-tax rate is 30%.

Find out the point of indifference between the available two modes of financing and state which option will be beneficial in different situations.

(d) 'A' Ltd. and 'B' Ltd. are identical in every respect except capital structure. 'A' Ltd. does not employ debts in its capital structure whereas 'B' Ltd. employs 12% Debentures amounting to ₹ 10 lakhs. Assuming that :

(i) All assumptions of M-M model are met;

(ii) Income-tax rate is 30%;

(iii) EBIT is ₹ 2,50,000 and

(iv) The Equity capitalization rate of 'A' Ltd. is 20%.

Calculate the value of both the companies and also find out the Weighted Average Cost of Capital for both the companies. (4 x 5 = 20 Marks)

Answer

(a) Difference between Minimum lead time Maximum lead time = 4 days

Max. lead time – Min. lead time = 4 days

Or, Max. lead time = Min. lead time + 4 days.....(i)

Average lead time is given as 6 days i.e.

$\frac{\text{Max. lead time} + \text{Min. lead time}}{2}$ = 6 days.....(ii)

Putting the value of (i) in (ii),

$\frac{\text{Min. lead time} + 4 \text{ days} + \text{Min. lead time}}{2}$ = 6 days

Or, Min. lead time + 4 days + Min. lead time = 12 days

Or, 2 Min. lead time = 8 days

Or, Minimum lead time = $\frac{8 \text{ days}}{2}$ = 4 days

Putting this Minimum lead time value in (i), we get

Maximum lead time = 4 days + 4 days = 8 days

(i) **Maximum consumption per day:**

Re-order level = Max. Re-order period × Maximum Consumption per day

1,60,000 units = 8 days × Maximum Consumption per day

Or, Maximum Consumption per day = $\frac{1,60,000 \text{ units}}{8 \text{ days}}$ = 20,000 units

(ii) **Minimum Consumption per day:**

Maximum Stock Level =

Re-order level + Re-order Quantity – (Min. lead time × Min. Consumption per day)

Or, 1,90,000 units = 1,60,000 units + 90,000 units – (4 days × Min. Consumption per day)

Or, 4 days × Min. Consumption per day = 2,50,000 units – 1,90,000 units

Or, Minimum Consumption per day = $\frac{60,000 \text{ units}}{4 \text{ days}}$ = 15,000 units

(b)

Units sold	Sales value (₹)	Profit/ (loss) (₹)
16,000 units	4,80,000 (₹ 30 × 16,000 units)	(1,60,000) (₹ 10 × 16,000 units)
40,000 units	12,00,000 (₹ 30 × 40,000 units)	3,20,000 (₹ 8 × 40,000 units)

$$\text{P/V Ratio} = \frac{\text{Change in profit}}{\text{Change in sales value}} \times 100 = \frac{₹\ 3,20,000 - (-₹\ 1,60,000)}{₹\ 12,00,000 - ₹\ 4,80,000} \times 100$$

$$= \frac{₹\ 4,80,000}{₹\ 7,20,000} \times 100 = 66.67\%$$

Total Contribution in case of 40,000 units = Sales Value × P/V Ratio

= ₹ 12,00,000 × 66.67%

= ₹ 8,00,000

So, Fixed cost = Contribution – Profit

= ₹ 8,00,000 – ₹ 3,20,000

= ₹ 4,80,000

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

= $\frac{₹\ 4,80,000}{66.67\%}$ = ₹ 7,20,000

(ii) If sales volume is 50,000 units, then profit = Sales Value × P/V Ratio – Fixed Cost

= (50,000 units × ₹ 30 × 66.67% - ₹ 4,80,000)

= ₹ 5,20,000

(iii) Minimum level of production where the company needs not to close the production, if unavoidable fixed cost is ₹ 1,50,000:

$$= \frac{\text{Avoidable fixed cost}}{\text{Contribution per unit}}$$

$$= \frac{\text{Total fixed cost} - \text{Unavoidable fixed cost}}{\text{Contribution per unit}}$$

$$= \frac{₹\ 4,80,000 - ₹\ 1,50,000}{₹\ 30 \times 66.67\%}$$

$$= \frac{₹\ 3,30,000}{₹\ 20} = 16,500 \text{ units.}$$

At production level of ≥ 16,500 units, company needs not to close the production.

(c) (i) (**Note**: The par value of equity share is assumed to be ₹100)

Amount = ₹ 80 Lakhs

Plan I = Equity of ₹ 60 lakhs + Debt of ₹ 20 lakhs

Plan II = Equity of ₹ 40 lakhs + Debentures of ₹ 40 Lakhs.

Plan I: Interest Payable on Loan

= 0.12 x 20,00,000 = 2,40,000

Plan II: Interest Payable on Debentures

= 0.12 x 40,00,000 = 4,80,000

Computation of Point of Indifference

$$\frac{(EBIT - I)(1 - t)}{E_1} = \frac{(EBIT - I_2)(1 - t)}{E_2}$$

$$\frac{(EBIT - 2,40,000)(1 - 0.3)}{60,000} = \frac{(EBIT - 4,80,000)(1 - 0.3)}{40,000}$$

2 (EBIT – 2,40,000) = 3(EBIT – 4,80,000)

2 EBIT – 4,80,000 = 3 EBIT – 14,40,000

2 EBIT – 3 EBIT = -14,40,000 + 4,80,000

EBIT = 9,60,000

(ii) Earnings per share (EPS) under Two Situations for both the Plans

Situation A (EBIT is assumed to be ₹ 9,50,000)		
Particulars	**Plan I**	**Plan II**
EBIT	9,50,000	9,50,000
Less: Interest @ 12%	2,40,000	4,80,000
EBT	7,10,000	4,70,000
Less: Taxes @ 30%	2,13,000	1,41,000
EAT	4,97,000	3,29,000
No. of Equity Shares	60,000	40,000
EPS	8.28	8.23

Comment: In Situation A, when expected EBIT is less than the EBIT at indifference point then, Plan I is more viable as it has higher EPS. The advantage of EPS would be available from the use of equity capital and not debt capital.

Situation B (EBIT is assumed to be ₹ 9,70,000)		
Particulars	**Plan I**	**Plan II**
EBIT	9,70,000	9,70,000
Less: Interest @ 12%	2,40,000	4,80,000
EBT	7,30,000	4,90,000
Less: Taxes @ 30%	2,19,000	1,47,000
EAT	5,11,000	3,43,000
No. of Equity Shares	60,000	40,000
EPS	8.52	8.58

Comment: In Situation B, when expected EBIT is more than the EBIT at indifference point then, Plan II is more viable as it has higher EPS. The use of fixed-cost source of funds would be beneficial from the EPS viewpoint. In this case, financial leverage would be favourable.

(Note: The problem can also be worked out assuming any other figure of EBIT which is more than 9,60,000 and any other figure less than 9,60,000. Alternatively, the answer may also be based on the factors/governing the capital structure like the cost, risk, control, etc. Principles).

(d) (i) Calculation of Value of Firms 'A Ltd.' and 'B Ltd' according to MM Hypothesis

Market Value of 'A Ltd' (Unlevered)

$$V_u = \frac{EBIT\ (1 - t)}{K_e}$$

$$= \frac{2,50,000\ (1 - 0.30)}{20\%}$$

$$= \frac{1,75,000}{20\%} = ₹\ 8,75,000$$

Market Value of 'B Ltd.' (Levered)

$V_E = V_u + DT$

= 8,75,000 + (10,00,000 x 0.30)

= 8,75,000 + 3,00,000 = ₹ 11,75,000

(ii) Computation of Weighted Average Cost of Capital (WACC)

WACC of 'A Ltd.' = 20% ($K_e = K_o$)

WACC of 'B Ltd.'

	B Ltd.
EBIT	2,50,000
Interest to Debt holders	(1,20,000)
EBT	1,30,000
Taxes @ 30%	(39,000)
Income available to Equity Shareholders	91,000
Total Value of Firm	11,75,000
Less: Market Value of Debt	(10,00,000)
Market Value of Equity	1,75,000
K_e = 91,000 / 1,75,000	0.52

For Computation of WACC B. Ltd

Component of Costs	Amount	Weight	Cost of Capital	WACC
Equity	1,75,000	0.149	0.52	0.0775
Debt	10,00,000	0.851	0.084*	0.0715
	11,75,000		WACC	0.1490

K_d= 12% (1- 0.3) = 12% x 0.7 = 8.4%

WACC = 14.90%

Question 2

(a) Z Limited obtained a contract No. 999 for ₹ 50 lacs. The following details are available in respect of this contract for the year ended March 31, 2014:

	₹
Materials purchased	*1,60,000*
Materials issued from stores	*5,00,000*
Wages and salaries paid	*7,00,000*
Drawing and maps	*60,000*
Sundry expenses	*15,000*
Electricity charges	*25,000*
Plant hire expenses	*60,000*
Sub-contract cost	*20,000*
Materials returned to stores	*30,000*
Materials returned to suppliers	*20,000*

The following balances relating to the contract No. 999 for the year ended on March 31, 2013 and March 31, 2014 are available:

	as on 31st March, 2013	***as on 31st March, 2014***
Work certified	*12,00,000*	*35,00,000*
Work uncertified	*20,000*	*40,000*
Materials at site	*15,000*	*30,000*
Wages outstanding	*10,000*	*20,000*

The contractor receives 75% of work certified in cash.

Prepare Contract Account and Contractee's Account. *(8 Marks)*

(b) Balance Sheets of Star Ltd. are as under:

Balance Sheet ***(in lakh ₹)***

Liabilities	***31/03/13 ₹***	***31/03/14 ₹***	***Assets***	***31/03/13 ₹***	***31/03/14 ₹***
Share Capital	*24.00*	*30.00*	*Plant & Machinery*	*15.00*	*21.00*
Reserve	*4.50*	*6.00*	*Buildings*	*12.00*	*18.00*
Profit & Loss A/c	*1.80*	*3.00*	*Investments*	*-*	*3.00*
Debentures	*-*	*6.00*	*Sundry Debtors*	*21.00*	*15.00*
Provision for Taxation	*2.10*	*3.00*	*Stock*	*6.00*	*12.00*
Proposed Dividend	*3.00*	*6.00*	*Cash in hand/Bank*	*6.00*	*6.00*
Sundry Creditors	*24.60*	*21.00*			
Total	***60.00***	***75.00***		***60.00***	***75.00***

With the help of following additional information, prepare Cash Flow Statement:

(i) Depreciation on plant and machinery was charged @ 25% on its opening balance and on building @ 10% on its opening balance.

(ii) During the year an old machine costing ₹ 1,50,000 (written down value ₹ 60,000) was sold for ₹ 1,05,000.

(iii) ₹ 1,50,000 was paid towards Income-tax, during the year. *(8 Marks)*

Answer

(a) Contract No. 999 Account for the year ended 31st March, 2014

Dr. Cr.

Particulars		Amount (₹)	Particulars	Amount (₹)
To Work in progress b/d:			By Material returned to store	30,000
- Work certified		12,00,000	By Material returned to suppliers	20,000
- Work uncertified		20,000	By Stock (Material) c/d	30,000
To Stock (Materials) b/d		15,000	By Work in progress c/d:	
To Material purchased		1,60,000	- Work certified	35,00,000
To Material issued		5,00,000	- Work uncertified	40,000
To Wages paid	7,00,000			
Less: Opening O/s	(10,000)			
Add: Closing O/s	20,000	7,10,000		
To Drawing and maps*		60,000		
To Sundry expenses		15,000		
To Electricity charges		25,000		
To Plant hire expenses		60,000		
To Sub- contract cost		20,000		
To Notional profit c/d (balancing figure)		8,35,000		
		36,20,000		36,20,000
To Costing P& L A/c (W.N.-1)		4,17,500	By Notional profit b/d	8,35,000
To WIP Reserve (balancing figure)		4,17,500		
		8,35,000		8,35,000

*Assumed that expenses incurred for drawing and maps are used exclusively for this contract only.

Dr. **Contractee's Account** Cr.

Particulars	Amount (₹)	Particulars	Amount (₹)
To Balance c/d (₹ 35,00,000 × 75%)	26,25,000	By Balance b/d (75% of ₹ 12,00,000)	9,00,000
		By Bank A/c	17,25,000
	26,25,000		26,25,000

Working Note:

1. Profit to be Transferred to Costing Profit & Loss account:

(a) Percentage of completion = $\frac{\text{Work certfied}}{\text{Value of contract}} \times 100$

$= \frac{₹\ 35,00,000}{₹\ 50,00,000} \times 100 = 70\%$

(b) Profit to be transferred to Costing Profit & Loss Account

$= \frac{2}{3} \times \text{Notional profit} \times \frac{\text{Cash received}}{\text{Work certified}}$

$= \frac{2}{3} \times ₹\ 8,35,000 \times \frac{75}{100} = ₹\ 4,17,500$

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

	₹ in lakhs	*₹ in lakhs*
I. Cash flows from Operating Activities		
Net profit made during the year (W.N.1)	8.70	
Provision for taxation made during the year	2.40	
Profit on sale of machinery	(0.60)	
Adjustment for depreciation on Machinery (W.N.2)	3.75	
Adjustment for depreciation on Land & Building	1.20	
Operating profit before change in Working Capital	15.45	
Increase in inventory	(6.00)	
Decrease in Debtors	6.00	
Decrease in Creditors	(3.60)	
Cash generated from operations	11.85	
Income-tax paid	(1.50)	
Net cash from operating activities		10.35

II.	**Cash flows from Investing Activities**		
	Purchase of Machinery	(10.20)	
	Sale of Machinery	1.05	
	Purchase of Building	(7.20)	
	Purchase of investments	(3.00)	
			(19.35)
III.	**Cash flows from Financing Activities**		
	Issue of shares	6.00	
	Issue of debentures	6.00	
	Dividend paid	(3.00)	9.00
Net increase in cash and cash equivalent			Nil
Cash and cash equivalents at the beginning of the period			6.00
Cash and cash equivalents at the end of the period			6.00

Working Notes:

(i) Net Profit made during the year ended 31.3.2014

		₹ in lakhs
Increase in P & L (Cr.) Balance		1.20
Add:	Transfer to general reserve	1.50
Add:	Provided for proposed dividend during the year	6.00
		8.70

(ii) Plant & Machinery Account

		₹ in lakhs			*₹ in lakhs*
To	Balance b/d	15.00	By	Depreciation (Bal. Fig.) [25% of 15]	3.75
To	P& L A/c [1.05 less 0.45 (0.60 less depreciation 0.15)]	0.60	By	Cash/Bank A/c	1.05
To	Cash/Bank (balancing fig.)	10.20	By	Balance c/d	21.00
		25.80			25.80

(iii) Provision for Taxation Account

	₹ *in lakhs*		₹ *in lakhs*
To Cash/Bank (Bal. Fig.)	1.50	By Balance b/d	2.10
To Balance c/d	3.00	By P & L A/c	2.40
	4.50		4.50

(iv) Proposed Dividend Account

	₹ *in lakhs*		₹ *in lakhs*
To Bank	3.00*	By Balance b/d	3.00
To Balance c/d	6.00	By P & L A/c (Bal. Fig.)	6.00
	9.00		9.00

* *last year proposed dividend assumed to be paid this year.*

(v) Building Account

	₹ *in lakhs*		₹ *in lakhs*
To Balance b/d	12.00	By Depreciation	1.20
To Bank A/c (Purchase)	7.20		
		By Balance c/d	18.00
	19.20		19.20

Question 3

(a) RST Limited is presently operating at 50% capacity and producing 30,000 units. The entire output is sold at a price of ₹ 200 per unit. The cost structure at the 50% level of activity is as under:

	₹
Direct Material	*75 per unit*
Direct Wages	*25 per unit*
Variable Overheads	*25 per unit*
Direct Expenses	*15 per unit*
Factory Expenses (25% fixed)	*20 per unit*
Selling and Distribution Exp. (80% variable)	*10 per unit*
Office and Administrative Exp. (100% fixed)	*5 per unit*

The company anticipates that the variable costs will go up by 10% and fixed costs will go up by 15%.

You are required to prepare an Expense budget, on the basis of marginal cost for the company at 50% and 60% level of activity and find out the profits at respective levels.

(8 Marks)

(b) From the following information, prepare Balance Sheet of a firm:

Stock Turnover Ratio (based on cost of goods sold)	-	*7 times*
Rate of Gross Profit to Sales	-	*25%*
Sales to Fixed Assets	-	*2 times*
Average debt collection period	-	*1.5 months*
Current Ratio	-	*2*
Liquidity Ratio	-	*1.25*
Net Working Capital	-	*₹ 8,00,000*
Net Worth to Fixed Assets	-	*0.9 times*
Reserve and Surplus to Capital	-	*0.25 times*
Long Term Debts	-	*Nil*

All Sales are on credit basis. *(8 Marks)*

Answer

(a) Expense Budget of RST Ltd. for the period

		Per unit (₹)	30,000 units	36,000 units
			Amount (₹)	Amount (₹)
Sales	**(A)**	200.00	60,00,000	72,00,000
Less: Variable Costs:				
- Direct Material		82.50	24,75,000	29,70,000
- Direct Wages		27.50	8,25,000	9,90,000
- Variable Overheads		27.50	8,25,000	9,90,000
- Direct Expenses		16.50	4,95,000	5,94,000
- Variable factory expenses (75% of ₹ 20 p.u.)		16.50	4,95,000	5,94,000
- Variable Selling & Dist. exp. (80% of ₹ 10 p.u.)		8.80	2,64,000	3,16,800
Total Variable Cost	**(B)**	179.30	53,79,000	64,54,800
Contribution	**(C) = (A – B)**	20.70	6,21,000	7,45,200

Less: Fixed Costs:			
- Office and Admin. exp. (100%)	--	1,72,500	1,72,500
- Fixed factory exp. (25%)	--	1,72,500	1,72,500
- Fixed Selling & Dist. exp. (20%)	--	69,000	69,000
Total Fixed Costs **(D)**	--	4,14,000	4,14,000
Profit **(C – D)**	--	2,07,000	3,31,200

(b) Working Notes;

1. Net Working Capital = Current Assets – Current Liabilities

$$= 2 - 1 = 1$$

$$\text{Current Assets} = \frac{\text{Net Working Capital} \times 2}{1}$$

$$= \frac{8,00,000 \times 2}{1}$$

Current Assets =16,00,000

Current Liabilities = 16,00,000 – 8,00,000 = 8,00,000

2. $$\text{Liquid Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

$$1.25 = \frac{\text{Current Assets - Stock}}{\text{Current Liabilities}}$$

$$1.25 = \frac{16,00,000 - \text{Stock}}{8,00,000}$$

1.25 x 8,00,000 = 16,00,000 – Stock

10,00,000 = 16,00,000 – Stock

Stock = 6,00,000

Liquid Assets = 1.25 x 8,00,000 = 10,00,000

3. $$\text{Stock Turnover Ratio} = \frac{\text{COGS}}{\text{Stock}}$$

$$7 = \frac{\text{COGS}}{6,00,000}$$

COGS = 42,00,000

4. Sales – Gross Profit = COGS

$$\frac{\text{Gross Profit}}{\text{Sales}} = 25\%$$

Gross Profit = 25% Sales

Sales – 25% Sales = COGS

$$\text{Sales} = \frac{42,00,000}{0.75} = 56,00,000$$

5. $$\text{Debtors turnover Ratio} = \frac{12}{1.5} = 8$$

$$\text{Debtors} = \frac{\text{Credit Sales}}{\text{Debtors Turnover}}$$

$$= \frac{56,00,000}{8} = 7,00,000$$

6. $$\frac{\text{Sales}}{\text{Fixed Assets}} = 2$$

$$\text{Fixed Assets} = \frac{56,00,000}{2} = 28,00,000$$

7. Net worth = Fixed Assets + Current Assets – Long-term Debt – Current Liabilities

= 28,00,000 + 16,00,000 – 0 – 8,00,000

= 36,00,000

8. $$\frac{\text{Reserves \& Surplus}}{\text{Capital}} = 0.25$$

Net worth = Reserves and Surplus + Capital

$$\text{Capital} = \frac{36,00,000}{1.25} = 28,80,000$$

Reserves and Surplus = 0.25 x 28,80,000

= 7,20,000

9. Cash = Liquid Assets – Debtors

= 10,00,000 – 7,00,000 = 3,00,000

10. Long Term Debts = Nil

Draft Balance Sheet

Liabilities	₹	Assets	₹
Share Capital	28,80,000	Fixed Assets	28,00,000
Reserves and Surplus	7,20,000	Current Assets:	
Long Term Debts	-	Stock	6,00,000
Current Liabilities	8,00,000	Debtors	7,00,000
	-	Cash	3,00,000
	44,00,000		44,00,000

(Note: The above solution has been worked out by ignoring the Net worth to Fixed assets ratio given in the question in order to match the total of assets and liabilities in the Balance Sheet).

Question 4

(a) Following information have been extracted from the cost records of XYZ Pvt. Ltd:

	₹
Stores:	
Opening balance	*54,000*
Purchases	*2,88,000*
Transfer from WIP	*1,44,000*
Issue to WIP	*2,88,000*
Issue for repairs	*36,000*
Deficiency found in stock	*10,800*

Work-in-progress:	₹
Opening balance	*1,08,000*
Direct wages applied	*1,08,000*
Overheads charged	*4,32,000*
Closing balance	*72,000*

Finished Production:	₹
Entire production is sold at a profit of 15% on cost at WIP	
Wages paid	*1,26,000*
Overheads incurred	*4,50,000*

Draw the Stores Ledger Control Account, Work-in-Progress Control Account, Overheads Control Account and Costing Profit and Loss Account. *(8 Marks)*

(b) The Capital structure of RST Ltd. is as follows:

	₹
Equity Share of ₹10 each	*8,00,000*
10% Preference Share of ₹100 each	*5,00,000*
12% Debentures of ₹100 each	*7,00,000*
	20,00,000

Additional Information:

- *Profit after tax (Tax Rate 30%) are ₹2,80,000*
- *Operating Expenses (including Depreciation ₹96,800) are 1.5 times of EBIT*
- *Equity Dividend paid is 15%*
- *Market price of Equity Share is ₹23*

Calculate:

(i) Operating and Financial Leverage

(ii) Cover for preference and equity dividend

(iii) The Earning Yield Ratio and Price Earning Ratio

(iv) The Net Fund Flow

Note: All operating expenses (excluding depreciation) are variable. *(8 Marks)*

Answer

(a) **Stores Ledger Control A/c**

Particulars	(₹)	Particulars	(₹)
To Balance b/d	54,000	By Work in Process A/c	2,88,000
To General Ledger Adjustment A/c	2,88,000	By Overhead Control A/c	36,000
		By Overhead Control A/c (Deficiency)	10,800*
To Work in Process A/c	1,44,000		
		By Balance c/d	1,51,200
	4,86,000		4,86,000

*Deficiency assumed as normal (alternatively can be treated as abnormal loss)

Work in Progress Control A/c

Particulars	(₹)	Particulars	(₹)
To Balance b/d	1,08,000	By Stores Ledger Control a/c	1,44,000
To Stores Ledger Control A/c	2,88,000	By Costing P/L A/c	7,20,000
To Wages Control A/c	1,08,000	(Balancing figures being Cost of finished goods)	
To Overheads Control a/c	4,32,000	By Balance c/d	72,000
	9,36,000		9,36,000

Overheads Control A/c

Particulars	(₹)	Particulars	(₹)
To Stores Ledger Control A/c	36,000	By Work in Process A/c	4,32,000
To Stores Ledger Control A/c	10,800	By Balance c/d	82,800
To Wages Control A/c (₹1,26,000- ₹1,08,000)	18,000	(Under absorption)	
To Gen. Ledger Adjust. A/c	4,50,000		
	5,14,800		5,14,800

Costing Profit & Loss A/c

Particulars	(₹)	Particulars	(₹)
To Work in progress	7,20,000	By Gen. Ledger Adjust. A/c (Sales) (₹ 7,20,000 × 115%)	8,28,000
To Gen. Ledger Adjust. A/c (Profit)	1,08,000		
	8,28,000		8,28,000

(b) Working Notes:

	₹
Net Profit after Tax	2,80,000
Tax @ 30%	1,20,000
EBT	4,00,000
Interest on Debentures	84,000
EBIT	4,84,000
Operating Expenses (1.5 times of EBIT)	7,26,000
Sales	12,10,000

(i) **Operating Leverage**

$$= \frac{\text{Contribution}}{\text{EBIT}}$$

$$= \frac{(12,10,000 - 6,29,200)}{4,84,000}$$

$$= \frac{5,80,800}{4,84,000} = 1.2 \text{ times}$$

$$\textbf{Financial Leverage} = \frac{\text{EBIT}}{\text{EBT}}$$

$$= \frac{4,84,000}{4,00,000}$$

$$= 1.21 \text{ times}$$

OR

$$\textbf{Financial Leverage} = \frac{\text{EBIT}}{\text{EBT} - \left(\frac{\text{Preference Dividend}}{1 - t}\right)}$$

$$= \frac{4,84,000}{4,00,000 - \left(\frac{50,000}{1 - 0.30}\right)}$$

$$= \frac{4,84,000}{4,00,000 - 71,428.57}$$

$$= \frac{4,84,000}{3,28,571} = 1.47 \text{ times}$$

(ii) **Cover for Preference Dividend**

$$= \frac{\text{PAT}}{\text{Preference Share Dividend}}$$

$$= \frac{2,80,000}{50,000} = 5.6 \text{ times}$$

Cover for Equity Dividend

$$= \frac{(\text{PAT - Preference Dividend})}{\text{Equity Share Dividend}}$$

$$= \frac{(2,80,000 - 50,000)}{1,20,000}$$

$$= \frac{2,30,000}{1,20,000} = 1.92 \text{ times}$$

(iii) **Earning Yield Ratio**

$$= \frac{\text{EPS}}{\text{Market Price}} \times 100$$

$$= \left(\frac{\frac{2,30,000}{80,000}}{23} \times 100 \right)$$

$$= \frac{2.875}{23} \times 100 = 12.5\%$$

Price – Earnings Ratio (PE Ratio)

$$= \frac{\text{Market Price}}{\text{EPS}} = \frac{23}{2.875}$$

= 8 times

(iv) **Net Funds Flow**

= Net PAT + Depreciation-Total Dividend

= 2,80,000 + 96,800 – (50,000 + 1,20,000)

= 3,76,800 – 1,70,000

Net Funds Flow = 2,06,800

Question 5

(a) Identify the methods of costing for the following:

(i) Where all costs are directly charged to a specific job.

(ii) Where all costs are directly charged to a group of products.

(iii) Where cost is ascertained for a single product.

(iv) Where the nature of the product is complex and method can not be ascertained.

(b) Explain the treatment of over and under absorption of overheads in cost accounts.

(c) Explain four kinds of float with reference to management of cash.

(d) Distinguish between 'Operating Lease' and 'Financial Lease'. *(4 x 4 = 16 Marks)*

Answer

(a)

Sl. No.	Method of Costing
(i)	Job Costing
(ii)	Batch Costing
(iii)	Unit Costing or Single or Output Costing
(iv)	Multiple Costing

(b) Treatment of over and under absorption of overheads are:-

(i) Writing off to costing P&L A/c:– Small difference between the actual and absorbed amount should simply be transferred to costing P&L A/c, if difference is large then investigate the causes and after that abnormal loss/ gain shall be transferred to costing P&L A/c.

(ii) Use of supplementary Rate: Under this method the balance of under and over absorbed overheads may be charged to cost of W.I.P., finished stock and cost of sales proportionately with the help of supplementary rate of overhead.

(iii) Carry Forward to Subsequent Year: Difference should be carried forward in the expectation that next year the position will be automatically corrected.

(c) Four Kinds of Float with reference to Management of Cash

The four kinds of float are:

(i) *Billing Float:* The time between the sale and the mailing of the invoice is the billing float.

(ii) *Mail Float:* This is the time when a cheque is being processed by post office, messenger service or other means of delivery.

(iii) *Cheque processing float:* This is the time required for the seller to sort, record and deposit the cheque after it has been received by the company.

(iv) *Bank processing float:* This is the time from the deposit of the cheque to the crediting of funds in the seller's account.

(d) Difference between Financial Lease and Operating Lease

S.No.	Finance Lease	Operating Lease
1.	The risk and reward incident to ownership are passed on the lessee. The lessor only remains the legal owner of the asset.	The lessee is only provided the use of the asset for a certain time. Risk incident to ownership belongs only to the lessor.
2.	The lessee bears the risk of obsolescence.	The lessor bears the risk of obsolescence.
3.	The lease is non-cancellable by either party under it.	The lease is kept cancellable by the lessor.
4.	The lessor does not bear the cost of repairs, maintenance or operations.	Usually, the lessor bears the cost of repairs, maintenance or operations.
5.	The lease is usually full payout.	The lease is usually non-payout.

(Note: Students may answer any four of the above differences)

Question 6

(a) PQR Ltd. having an annual sales of ₹ 30 lakhs, is re-considering its present collection policy. At present, the average collection period is 50 days and the bad debt losses are 5% of sales. The company is incurring an expenditure of ₹ 30,000 on account of collection of receivables.

The alternative policies are as under:

	Alternative I	***Alternative II***
Average Collection Period	*40 days*	*30 days*
Bad Debt Losses	*4% of sales*	*3% of sales*
Collection Expenses	*₹ 60,000*	*₹ 95,000*

Evaluate the alternatives on the basis of incremental approach and state which alternative is more beneficial. *(8 Marks)*

(b) The following information relate to Process A:

(i)	*Opening Work-in-Progress*	*8,000 units at ₹ 75,000*
	Degree of Completion:	
	Material	*100%*
	Labour and Overhead	*60%*
(ii)	*Input 1,82,000 units at*	*₹ 7,37,500*
(iii)	*Wages paid*	*₹ 3,40,600*
(iv)	*Overheads paid*	*₹ 1,70,300*

(v)	*Units scrapped*	*14,000*
	Degree of Completion:	
	Material	*100 %*
	Wages and Overheads	*80%*
(vi)	*Closing Work - in- Progress*	*18,000 units*
	Degree of Completion:	
	Material	*100%*
	Wages and Overheads	*70%*

(vii) Units completed and transferred 1,58,000 to next process

(viii) Normal loss 5% of total input including opening WIP

(ix) Scrap value is ₹ 5 per unit to be adjusted out of direct material cost

You are required to compute on the basis of FIFO basis:

(i) Equivalent Production

(ii) Cost Per Unit

(iii) Value of Units transferred to next process. *(8 Marks)*

Answer

(a) Evaluation of Alternative Collection Programmes

	Present Policy	*Alternative I*	*Alternative II*
	₹	*₹*	*₹*
Sales Revenues	30,00,000	30,00,000	30,00,000
Average Collection Period (ACP) (days)	50	40	30
Receivables (₹) $\left(\text{Sales} \times \frac{\text{ACP}}{360}\right)$	4,16,667	3,33,333	2,50,000
Reduction in Receivables from Present Level (₹)	–	83,334	1,66,667
Savings in Interest @ 10% p.a. **(A)**	–	₹ 8,333	₹ 16,667
% of Bad Debt Loss	5%	4%	3%
Amount (₹)	1,50,000	1,20,000	90,000
Reduction in Bad Debts from Present Level **(B)**	–	30,000	60,000

Incremental Benefits from Present Level **(C) = (A) + (B)**	–	38,333	76,667
Collection Expenses (₹)	30,000	60,000	95,000
Incremental Collection Expenses from Present Level **(D)**	–	30,000	65,000
Incremental Net Benefit **(C – D)**	–	₹ 8,333	₹ 11,667

Conclusion: From the analysis it is apparent that Alternative I has a benefit of ₹ 8,333 and Alternative II has a benefit of ₹ 11,667 over present level. Alternative II has a benefit of ₹ 3,334 more than Alternative I. Hence Alternative II is more viable.

*(**Note:** In absence of Cost of Sales, sales has been taken for purpose of calculating investment in receivables. Cost of Funds has been assumed to be 10%. 1 year = 360 days.)*

(b) (i) Statement of Equivalent Production

(FIFO Method)

Input		Output		Equivalent Production			
Particulars	Units	Particulars	Units	Material		Labour & Overheads	
				(%)	Units	(%)	Units
Opening WIP	8,000	Transfer to next Process :					
Introduced	1,82,000	Opening WIP completed	8,000	--	--	40	3,200
		Introduced & completed	1,50,000	100	1,50,000	100	1,50,000
		Normal loss 5% (8,000 + 182,000)	9,500	--	--	--	--
		Abnormal loss	4,500	100	4,500	80	3,600
		Closing WIP	18,000	100	18,000	70	12,600
	1,90,000		1,90,000		1,72,500		1,69,400

(ii) Computation of Cost per unit

Particulars	Materials (₹)	Labour (₹)	Overhead (₹)
Input of Materials	7,37,500	--	--
Expenses	--	3,40,600	1,70,300
Total	7,37,500	3,40,600	1,70,300
Less : Sale of Scrap (9,500 units x ₹ 5)	(47,500)	--	--
Net cost	6,90,000	3,40,600	1,70,300
Equivalent Units	1,72,500	1,69,400	1,69,400
Cost Per Unit	4.0000	2.0106	1.0053

Total cost per unit = ₹ (4.0000 + 2.0106 + 1.0053) = ₹ 7.0159

(iii) Value of units transferred to next process:

	Amount (₹)	Amount (₹)
Opening W-I-P	75,000	
Add: Labour (3,200 units × ₹ 2.0106)	6,434	
Overhead (3,200 units × ₹ 1.0053)	3,217	84,651
New introduced (1,50,000 units × ₹ 7.0159)		10,52,385
		11,37,036

Question 7

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

(a) Why money in the future is worth less than similar money today? Give the reasons and explain.

(b) Distinguish between 'Business Risk' and 'Financial Risk'.

(c) What is 'Internal Rate of Return'? Explain.

(d) State the different types of Packing Credit.

(e) Define 'Labour Turnover'. How is it measured? Explain. *(4 x 4 = 16 Marks)*

Answer

(a) Money in the Future is worth less than the Similar Money Today due to several reasons:

- **Risk** – There is uncertainty about the receipt of money in future.
- **Preference For Present Consumption** – Most of the persons and companies in general, prefer current consumption over future consumption.
- **Inflation** – In an inflationary period a rupee today represents a greater real purchasing power than a rupee a year hence.
- **Investment Opportunities** – Most of the persons and companies have a preference for present money because of availabilities of opportunities of investment for earning additional cash flow.

(b) Business Risk and Financial Risk: Business risk refers to the risk associated with the firm's operations. It is an unavoidable risk because of the environment in which the firm has to operate and the business risk is represented by the variability of earnings before interest and tax (EBIT). The variability in turn is influenced by revenues and expenses. Revenues and expenses are affected by demand of firm's products, variations in prices and proportion of fixed cost in total cost.

Whereas, Financial risk refers to the additional risk placed on firm's shareholders as a result of debt use in financing. Companies that issue more debt instruments would have

higher financial risk than companies financed mostly by equity. Financial risk can be measured by ratios such as firm's financial leverage multiplier, total debt to assets ratio etc.

(c) Internal Rate of Return: It is that rate at which discounted cash inflows are equal to the discounted cash outflows. It can be stated in the form of a ratio as follows:

$$\frac{\text{Cash inflows}}{\text{Cash Outflows}} = 1$$

This rate is to be found by trial and error method. This rate is used in the evaluation of investment proposals. In this method, the discount rate is not known but the cash outflows and cash inflows are known.

In evaluating investment proposals, internal rate of return is compared with a required rate of return, known as cut-off rate. If it is more than cut-off rate the project is treated as acceptable; otherwise project is rejected.

(d) Different Types of Packing Credit

Packing credit may be of the following types:

(i) ***Clean Packing credit****:* This is an advance made available to an exporter only on production of a firm export order or a letter of credit without exercising any charge or control over raw material or finished goods. It is a clean type of export advance. Each proposal is weighted according to particular requirements of the trade and credit worthiness of the exporter. A suitable margin has to be maintained. Also, Export Credit Guarantee Corporation (ECGC) cover should be obtained by the bank.

(ii) ***Packing credit against hypothecation of goods****:* Export finance is made available on certain terms and conditions where the exporter has pledgeable interest and the goods are hypothecated to the bank as security with stipulated margin. At the time of utilising the advance, the exporter is required to submit alongwith the firm export order or letter of credit, relative stock statements and thereafter continue submitting them every fortnight and whenever there is any movement in stocks.

(iii) ***Packing credit against pledge of goods****:* Export finance is made available on certain terms and conditions where the exportable finished goods are pledged to the banks with approved clearing agents who will ship the same from time to time as required by the exporter. The possession of the goods so pledged lies with the bank and is kept under its lock and key.

(iv) ***E.C.G.C. guarantee:*** Any loan given to an exporter for the manufacture, processing, purchasing, or packing of goods meant for export against a firm order qualifies for the packing credit guarantee issued by Export Credit Guarantee Corporation.

(v) ***Forward exchange contract****:* Another requirement of packing credit facility is that if the export bill is to be drawn in a foreign currency, the exporter should enter into a forward exchange contact with the bank, thereby avoiding risk involved in a possible change in the rate of exchange.

(Note: Students may answer any four of the above packing credits).

(e) Labour turnover in an organisation is the rate of change in the composition of labour force during a specified period measured against a suitable index. The standard of usual labour turnover in the industry or labour turnover rate for a past period may be taken as the index or norm against which actual turnover rate should be compared.

The methods for measuring labour turnover are:

Replacement method: This method takes into consideration actual replacement of labour irrespective of no. of workers leaving.

$$\text{Replacement method} = \frac{\text{Number of employees replaced during the year}}{\text{Average number of employees on roll during the year}} \times 100$$

Separation method: In this method labour turnover is measured by dividing the total no. of separations during the period by average no. of workers on payroll during the same period.

$$\text{Separation method} = \frac{\text{Number of employees separated during the year}}{\text{Average number of employees on roll during the year}} \times 100$$

Flux method: This method takes into account both the replacements as well as no. of separations during the period.

$$\text{Flux method} = \left[\frac{\text{No. of employees replaced during the year} + \text{No. of employees separated during the year}}{\text{Average number of employees on roll during the year}}\right] \times 100$$