

MTP_Intermediate_Syllabus 2012_Jun2014_Set 2

Paper-8: Cost Accounting & Financial Management

Time Allowed: 3 Hours

Full Marks: 100

Section A- Cost Accounting

(Answer Question No.1 which is compulsory and any three from the rest in this section)

Working Notes should form part of the answer.

1. (a) A work measurement study was carried out in a firm for 20 hours and the following information was generated.

Units produced	340
Idle time	15%
Performance rating	120%
Allowance time	10% of standard time

What is the Standard time for task?

[2]

- (b) What is Sunk Cost?

[2]

- (c) Time allowed for a job is 45 hours; a worker takes 40 hours to complete the job. Time rate per hour is ₹15. Compute the total earnings of the worker.

[2]

- (d) A firm requires 16,000 nos. of certain component, which it buys at ₹60 each. The cost of placing an order and following it up is ₹120 and the annual storage charges work out to 10% of the cost of the item. To get maximum benefit the firm should place order for how many units at a time?

[2]

- (e) Consider the following particulars for a month :

Budgeted fixed production overhead cost - Rs. 1,10,000

Budgeted production - 5,500 units

The fixed overhead cost was under absorbed by Rs. 12,000 and the fixed production overhead expenditure variance was Rs. 2,500 (Adverse).

What is the number of units produced during the month was ?

[2]

- (f) If the minimum stock level and average stock level of raw material "A" are 4,000 and 9,000 units respectively, find out its reorder quantity.

[2]

2. (a) State the various causes of Labour Turnover?

[6]

- (b) For a production department of a manufacturing company you are required to:

(i) Prepare a flexible budget of overhead

(ii) Prepare flexible budget of overhead at 70% and 110% of budget volume;

(iii) Calculate a departmental hourly rate of overhead absorption as per (i) and (ii) above.

The budgeted level of activity of the department is 6,000 hours per period and the study of the various items of expenditure reveals the following:

	₹	₹ per hour
Indirect wages		0.40
Repairs upto 2,000 hours	100	
For each additional 500 hours		

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Upto a total of 4,000 hours	35	
Additional from 4,001 to 5,000 hrs.	60	
Additional above 5,000 hrs.	70	
Rent and Rates	350	
Power upto 3,600 hrs	0.25	
For hours above 3,600	0.20	
Consumable supplies		0.24
Supervision upto 2,500 hours		400
Additional for each extra 600 hrs		
Above 2,500 and upto 4,900 hrs		100
Additional above 4,900 hrs		150
Depreciation up to 5,000 hrs		650
Above 5,000 hrs and upto 6,500 hrs.	820	
Cleaning upto 4,000 hrs.	60	
Above 4,000 hrs	80	
Heat and from 2,100 hrs to 3,500 hrs	120	
Lighting from 3,500 hrs to 5,000 hrs	150	
Above 5,000 hrs	175	

(1½ + 3 + 1½)

(c) Write a note on Perpetual Inventory.

[4]

3. (a) Calculation of a basic EOQ depends on certain assumptions. "List down these assumptions.

[3]

(b) The New Enterprises Ltd. has Production Depts. A, B and C and two Service Depts. D and E. The following figures are extracted from the records of the company.

Rent and Rates	₹5,000
General Lighting	600
Indirect Wages	1,500
Power	1,500
Depreciation of Machinery	10,000
Sundries	10,000

The following further details are available:

	Total	A	B	C	D	E
Floor Space (Sq. ft.)	10,000	2,000	2,500	3,000	2,000	500
Light Points	60	10	15	20	10	5
Direct Wages (₹)	10,000	3,000	2,000	3,000	1,500	500
H.P. of Machines	150	60	30	50	10	-
Value of Machinery (₹)	2,50,000	60,000	80,000	1,00,000	5,000	5,000
Working Hours	-	6,226	4,028	4,066	-	-

The expenses of D and E are allocated as following:

	A	B	C	D	E
D	20%	30%	40%	-	10%
E	40%	20%	30%	10%	-

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What is the total cost of an article if its raw material cost is ₹ 50, labour cost ₹ 30, and it passes through departments A, B and C for 4, 5 and 3 hours respectively. [8]

(c) Calculate the earnings of A and B from the following particulars for a month and allocate the labour cost to each job X, Y and Z:

	A	B
(i) Basic Wages	Rs. 100	160
(ii) Dearness Allowance	50%	50%
(iii) Contribution to Provident Fund (on basic wages)	8%	8%
(iv) Contribution to Employees' State Insurance (on basic wages)		2% 2%
(v) Overtime	Hours 10	

The Normal working hours for the month are 200. Overtime is paid at double the total of normal wages and dearness allowance. Employer's contribution to State Insurance and Provident Fund are at equal rates and employees' contributions. The two workers were employed on jobs X, Y and Z in the following proportions:

	Jobs		
	X	Y	Z
Workers A	40%	30%	30%
Worker B	50%	20%	30%

Overtime was done on job Y.

[2+3]

4. (a) What do you understand by ABC analysis of inventory control ? A factory uses 4,000 varieties of inventory. In terms of inventory holding and inventory usage, the following information is compiled:

No. of varieties of inventory	%	% value of inventory holding (average)	% of inventory usage (in end-product)
3,875	96.875	20	5
110	2.750	30	10
<u>15</u>	<u>0.375</u>	<u>50</u>	<u>85</u>
<u>4,000</u>	<u>100.000</u>	<u>100</u>	<u>100</u>

Classify the items of inventory as per ABC analysis with reasons.

[3+2+2+2]

(b) Raw materials 'AXE' costing Rs. 150 per kg. and 'BXE' costing Rs. 90 per kg. are mixed in equal proportions for making product 'A'. The loss of material in processing works out to 25% of the product. The production expenses are allocated at 40% of direct material cost. The end product is priced with a margin of 20% over the total cost.

Material 'BXE' is not easily available and substitute raw material 'CXE' has been found for 'BXE' costing Rs. 75 per kg. It is required to keep the proportion of this substitute material in the mixture as low as possible and at the same time maintain the selling price of the end product at existing level and ensure the same quantum of profit as at present.

You are required to compute the ratio of the mix of the raw materials 'AXE' and 'CXE'. [6]

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5. (a) A Company is undecided as to what kind of wage scheme should be introduced. The following particulars have been compiled in respect of three systems, which are under consideration of the management.

Workers	A	B	C
Actual hours worked in a week	38	40	34
Hourly rate of wages	Rs. 6	Rs. 5	Rs. 7.20
Production in units			
Product P	21	-	60
Product Q	36	-	135
Product R	46	25	-
Standard time allowed per unit of each product is:			
Minutes	P 12	Q 18	R 30

For the purpose of piece rate, each minute is valued at Rs. 0.10

You are required to calculate the wages of each worker under:

- (i) Guaranteed hourly rates basis
- (ii) Piece work earnings basis, but guaranteed at 75% of basic pay (guaranteed hourly rate) if his earnings are less than 50% of basic pay.
- (iii) Premium bonus basis where the worker receives bonus based on Rowan scheme.

[2+3+3]

(b) SK Enterprise manufactures a special product "ZE". The following particulars were collected for the year 2004:

Annual consumption	12,000 units (360 days)
Cost per unit	Re. 1
Ordering cost	Rs. 12 per order
Inventory carrying cost	24%
Normal lead time	15 days
Safety stock	30 days consumption

Required:

- (i) Re-order quantity
- (ii) Re-order level
- (iii) What should be the inventory level (ideally) immediately before the material order is received? (2+1+1)

(c) Explain the treatment of overtime premium in cost accounting. Suggest steps for controlling overtime. [2+2]

Section B–Financial Management

(Answer Question no.6 which is compulsory and any two from the rest in this section.)

6. (a) GEMINI LTD. has total assets of ₹60 crore and a Debt/equity ratio of 0.5. Its sales are ₹27 crore and it has total fixed cost of ₹7 crore. If the company's EBIT is ₹6 crore, its tax rate is 40% and the interest rate on debt is 12%, the ROE of GEMINI LTD. would be how much? [2]

(b) The budgeted annual sales of firm are ₹80 lakhs and 25% of the same is cash sales. If the average amount debtors of the firm are 5 lakhs, the average collection period of credit sales will be how many months' months? [2]

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(c) A chemical company has net sales of ₹50 million, cash expenses (including Taxes) of ₹35 million and depreciation expenses of ₹5 million. If Debtors decrease over the period by ₹6 million, what will be the cash from operation? [2]

(d) Consider the following for strong Ltd: [2]

Return on Government Securities : 12%
 Share Beta : 1.50
 Market Return : 16%
 Based on CAPM, find out the cost of equity capital.

7. (a) From the following details of HPL Ltd. Calculate the Cost of Capital.

Debt	Amount	Nominal Interest
Foreign Loan	US \$ 100 million	5%
Local Currency Loan	₹ 2200 million	12%

Expected depreciation of rupee	3% per annum
Current exchange rate	₹ 45 per US \$
Bank /F1 guarantee for raising foreign capital	1%

Equity Capital	₹ 3000 million
Unlevered Beta	0.6
Risk-free Rate	6%
Market Premium	8%

The project expected to have an effective tax rate of 30 per cent. [6]

(b) Complete the Balance Sheet given below with help of the following information:

Gross Profits	₹ 40,500
Shareholders' Funds	₹ 5,75,000
Gross Profit margin	15%
Credit sales to Total Sales	60%
Total Assets turnover	0.3 times
Average collection period (a 360 days year)	4 times
Current ratio	20 days
Long-term Debt to Equity	1.35
	45%

Balance Sheet

Creditor	Cash
Long-term debt	Debtors
Shareholder's funds	Inventory
		Fixed assets

[10]

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8. (a) The net Sales of W Ltd. is ₹ 45 crores. Earnings before interest and tax of the company as a percentage of net sales is 12%. The capital employed comprises ₹ 15 crores of equity, ₹ 3 crores of 12% Cumulative Preference Share Capital and 13% Debentures of ₹ 9 crores. Income-tax rate is 30%.

- (i) Calculate the Return-on-equity for the company
- (ii) Calculate the Operating Leverage of the Company given that combined leverage is 4.5. [3+2]

(b) Write short note on Venture Capital Financing. [4]

(c) Y Ltd. has ₹ 15,00,000 allocated for capital budgeting purposes. The following proposals and associated profitability indexes have been determined:

Project	Amount ₹	Profitability Index
1	4,50,000	1.22
2	2,25,000	0.95
3	5,25,000	1.20
4	6,75,000	1.18
5	3,00,000	1.20
6	6,00,000	1.05

Which of the above investments should be undertaken? Assume that projects are indivisible and there is no alternative use of the money allocated for capital budgeting.

9. (a) Superior Engineering proposes a project with the following data :

- i. Total asset : ₹ 450 lakhs (₹ 250 lakhs of Fixed Assets and ₹ 200 lakhs of Current Assets)
- ii. Scheme of financing : ₹ 100 lakhs equity, ₹ 200 lakhs term loan, ₹ 100 lakhs working capital advance and ₹ 50 lakhs trade creditors.
- iii. Interest rate : Term loan 12% p.a. and working capital advance : 15% p.a.
- iv. Term loan is repayable in 5 equal installments, commencing from 3rd year of operations. (Assume that installment for each year is paid on the last day of the year).
- v. Depreciation : 30% on written down value.
- vi. Production is expected to reach 60% of capacity in the 1st year of operations, 70% in the 2nd year and 80% from the 3rd year onwards.
- vii. Expected revenue from the project will be ₹ 500 lakhs p.a. on 10% capacity utilization and corresponding Direct Costs are ₹ 200 lakhs. Fixed costs are ₹ 100 lakhs p.a. Working capital advance of ₹ 100 lakhs is on 80% capacity and proportionately reduced in the first two years.
- viii. Tax rate applicable is 50%.

Assuming that each year's production is sold away in the same year, draw the projected profit & loss account for each year of operation and the operational cash flow. Also calculate the Debt Service Coverage Ratio. [10]

(b) The following information relates to nana Ltd.

Earnings of the Company	₹10, 00,000
Dividend payout ratio	60%
No. of shares outstanding	2, 00,000

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Rate of Return on Investment 15%

Equity Capitalization Rate 12%

- i) What would be the Market Value per Share as per Walter's Model?
- ii) What is the optimum Dividend Payout Ratio according to Walter's Model, and the Market Value of Company's Share at that payout ratio? [2+2+2]