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Paper 8-Cost Accounting & Financial Management

Section-A Cost Accounting-Prime Cost & Overheads (Full Marks 60)

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

1. Answer the following **(6x2=12)**

(a) What is Imputed Cost?

(b) Compute the Inventory turnover ratio from the following:

Opening stock=₹1,00,000

Closing Stock=₹1,60,000

Material Consumed=₹7,80,000

(c) A work measurement study was carried out in a firm for 10 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?

(d) Royalty paid on sale ₹15,000, Royalty paid on units produced ₹10,000, hire charges of equipment used for production ₹2,000, Design charges ₹15,000, Software development charges related to production ₹20,000. Compute the direct expenses.

(e) State the treatment of Bad Debts in Cost record?

(f) State the objective of Cost Accounting

2.

(a) A work measurement study was carried out in a firm for 10 hours and the following information was generated:

Units produced 700; Idle time 15% ; performance rating 120%; allowance time 10% of standard time. What is the standard time for the task? **(6)**

(b) Write short notes on Generally Accepted Cost Accounting Principles (GACAP). **(4)**

(c) ABC Ltd. are the manufactures of picture tubes for T.V. The following are the details of their operation during the year 2012:

Average monthly market demand	2,000 tubes
Ordering cost	₹100 per order
Inventory carrying cost	20% per annum
Cost of tubes	₹500 per tube
Normal usage	100 tubes per week
Minimum usage	50 tubes per week
Maximum usage	200 tubes per week
Lead time to supply	8-10 weeks

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Compute from the above:

- (i) Economic order quantity. If the supplier is willing to supply quarterly 1,500 units at a discount of 10% is it worth accepting?
- (ii) Maximum level of stock
- (iii) Minimum level of stock
- (iv) Re-order level

(4 x 1.5=6)

3.

- (a) In a factory the expenses of factory are charged on a fixed percentage basis on wages and office overhead expenses are calculated on the basis of percentage of works cost.

	I Order (₹)	II Order (₹)
Material	12,500	18,000
Wages	10,000	14,000
Selling price	44,850	61,880
Percentage of profit on cost	15%	12%

Find the rate of Factory OH and Office OH.

(8)

- (b) Explain Bill of Material (BoM) and its relevance.

(3)

- (c) A company has the option to procure a particular material from two sources:

Source I assures that defective will not be more than 2% of supplied quantity.

Source II does not give any assurance, but on the basis of past experience of supplies received from it, it is observed that defective percentage is 2.8%. The material is supplied in lots of 1,000 units. Source II supplies the lot at a price, which is lower by ₹100 as compared to Source I. The defective units of material can be rectified for use at a cost of ₹5 per unit. You are required to find out which of the two sources is more economical.

(5)

4.

- (a) ABC Ltd. company having 25 different types of automatic machine, furnishes you the following data for 2011-2012 in respect of machine B:

1.	Cost of machine	₹50,000
	Life-10 years	Scrap value is nil
2.	Overhead expenses are:	
	Factory rent	₹50,00 p.a
	Heating & lighting	₹40,000
	Supervision	₹1,50,000 p.a
	Reserve equipment of machine B	₹6,000 p.a
	Area of the factory	80,000 sq.ft.
	Area occupied by machine B	3,000 sq.ft.
3.	Wages of operator is ₹24 per day of 8 hours including all fringe benefits. He attends to one machine when it is under set up and two machines while under operation.	
4.	Estimated production hours	3,600 p.a.
	Estimated set up time	400 hrs. p.a.
	Power 0.5 per hour	

Prepare a schedule of comprehensive machine hour rate and find the cost of the following jobs:

	Job 1002	Job 1008
Set up time (hrs.)	80	40
Operation time (hrs.)	130	160

(8)

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(b) A manufacturing unit produces two products X and Y. The following information is furnished:

Particulars	Product X	Product Y
Units Produced (Qty)	20,000	15,000
Units Sold (Qty)	15,000	12,000
Machine Hours Utilised	10,000	5,000
Design Charges	15,000	18,000
Software development charges	24,000	36,000

Royalty paid on sales ₹54,000 [@ ₹2 per unit sold, for both the products]; Royalty paid on units produced ₹35,000 [@ Re.1 per unit purchased, for both the products], Hire charges of equipment used in manufacturing process of Product X only ₹5,000, Compute the Direct Expenses as per CAS 10. (8)

5.

(a) XYZ Ltd. Company produced a simple product in three sizes X, Y and Z. Prepare a statement showing the selling and distribution expenses apportioned over these three sizes applying the appropriate basis for such apportionment in each case from the particulars indicated:

Express the total of the costs so apportioned to each size as:

- (i) Cost per unit sold (nearest paise).
- (ii) A percentage of sales turnovers (nearest to two places for decimal).

The expenses are;

Expenses	Amount (₹)	Basic of apportionment
Sales salaries	10,000	Direct charges
Sales commission	6,000	Sales turnover
Sales office expenses	2,096	Number of orders
Advt. General	5,000	Sales turnover
Advt. specific	22,000	Direct charges
Packing	3,000	Total volume cu.ft. product sold
Delivery expenditure	4,000	-do-
Warehouse expenses	1,000	-do-
Expenses credit collection	1,296	Number of orders

Data available relating to the three sizes are as follows:

	Total	Size X	Size Y	Size Z
(i) No. of salesmen, all paid same salary	10	5	1	4
(ii) Units sold	10,400	3,400	4,000	3,000
(iii) No. of orders	1,600	700	800	100
(iv) % of specific advt.	100%	30%	40%	30%
(v) Sales turnover	2,00,000	58,000	80,000	62,000
(vi) Volume of cu.ft. per unit of finished products	-	5	8	17

(7)

(b) "The more kilometers you travel with your own vehicle, the cheaper it becomes." Comment briefly on this statement. (2)

(c) State the treatment of the following transactions:

- (i) Cost of special packing at the request of the customer;
- (ii) Cost of research relating to marketing activities;

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- (iii) Cost of unsuccessful research; (1x3=3)
- (d) In a factory guaranteed wages at the rate of ₹1.80 per hour are paid in a 50 hour week. By time and motion study it is estimated that to manufacture one unit of a particular product 20 minutes are taken, the time allowed is increased by 25%. During the week A produced 180 units of the product. Calculate his wages under the following method:
- (i) Time rate.
(ii) Piece rate with a guaranteed weekly wages.
(iii) Halsey premium bonus.
(iv) Rowan premium Bonus. (4)

Section B – Financial Management

(Full Marks: 40)

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

6. (a) Cost of Equity=18%

The average income tax rate of shareholders is 30%. Brokerage cost of 2% is expected to be incurred while investing their dividends in alternative securities. What is the Cost of retained earnings ? [2]

(b) The average daily sales of a company are ₹ 5 lac. The company normally keeps a cash balance of ₹ 80000. If the weighted operating cycle of the company is 45 days, what is the working capital requirement? [2]

(c) Define EVA. [4]

7. (a) Your client is holding the following securities:

Particulars of Securities	Cost ₹	Dividends/Interest ₹	Market price ₹	Beta
Equity Shares:				
Gold Ltd.	10,000	1,725	9,800	0.6
Silver Ltd.	15,000	1,000	16,200	0.8
Bronze Ltd.	14,000	700	20,000	0.6
GOI Bonds	36,000	3,600	34,500	1.0

Average return of the portfolio is 15.7%, calculate:

- (i) Expected rate of return in each, using the Capital Asset Pricing Model (CAPM).
(ii) Risk free rate of return. [4+2=6]

(b) The following is the condensed Balance sheet of NHPC Ltd. at the beginning and end of the year.

Balance Sheets

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As at

Particulars	31.12.2011	31.12.2012
Cash	50,409	40,535
Sundry debtors	77,180	73,150
Temporary investments	1,10,500	84,000
Prepaid expenses	1,210	1,155
Inventories	92,154	1,05,538
Cash surrender value of Life Insurance Policy	4,607	5,353
Land	25,000	25,000
Building, machinery etc.	1,47,778	1,82,782
Debenture discount	4,305	2,867
	5,13,143	5,20,380
Sundry creditors	1,03,087	95,656
Outstanding expenses	12,707	21,663
4% mortgage debentures	82,000	68,500
Accumulated depreciation	96,618	81,633
Allowance for inventory loss	2,000	8,500
Reserve for contingencies	1,06,731	1,34,178
Surplus in P & L A/c	10,000	10,250
Share capital	1,00,000	1,00,000
	5,13,143	5,20,380

The following information concerning the transaction are available :

- i. Net profit for 2010 as per Profit and loss account was ₹ 49,097
- ii. A 10% cash dividend was paid during the year.
- iii. The premium of Life Insurance Policies were ₹ 2,773 of which ₹ 1,627 was charged to Profit and Loss Account of the year.
- iv. New machinery was purchased for ₹ 31,365 and machinery costing ₹ 32,625 was sold during the year. Depreciation on machinery sold had accumulated to ₹ 29,105 at the date of sale. It was sold as scrap for ₹ 1,500. The remaining increase in Fixed Assets resulted from construction of a Building.
- v. The Mortgage Debentures mature at the rate of ₹ 5,000 per year. In addition to the above, the company purchased and retired ₹ 8,500 of Debentures at ₹ 103. Both the premium on retirement and the applicable discount were charged to Profit and Loss Account.
- vi. The allowance for Inventory Loss was created by a charge to expenses in each year to provide for obsolete items.
- vii. A debit to reserve for contingencies of ₹ 11,400 was made during the year. This was in respect of a past tax liability.

You are required to prepare a statement showing the Sources and Applications of funds for the year 2012. **[10]**

8. (a) From the following information, ascertain whether the firm is following an optimal dividend policy as per Walter's model :

Total earnings	₹ 6,00,000
No. of equity shares of ₹ 100 each	40,000
Dividend paid	₹ 1,60,000
Price-earnings (P/E) Ratio	10

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The firm is expected to maintain its rate of return of fresh investment. What should be the P/E ratio at which dividend policy will have no effect on the value of the share ? Will your decision change if the P/E ratio is 5 instead of 10 ? (7)

b) M Ltd. has a capital of ₹ 10,00,000 in equity shares of ₹ 100 each. The shares are currently quoted at par. The company proposes declaration of a dividend of ₹ 10 per share. The capitalization rate for the risk class to which the company belongs is 12%. What will be the market price of the share at the end of the year, if – (i) no dividend is declared; and (ii) 10% dividend is declared ? Assuming that the company pays the dividend and has net profits of ₹ 5,00,000 and makes new investments of ₹ 10,00,000 during the period, how many new shares must be issued ? Use the M. M. Model. (6)

(c) Write short note o forfeiting (3)

9. (a) A company is faced with the problem of choosing between two mutually exclusive projects. Project A requires a cash outlay of ₹ 1,00,000 and cash running expenses of ₹ 35,000 per year. On the other hand, Project B will cost ₹ 1,50,000 and require cash running expenses of ₹ 20,000 per year. Both the machines have a eight-year life. Project A has a salvage value of ₹ 4,000 and Project B has a salvage value of ₹ 14,000. The company's tax rate is 30% and it has a 10% required rate of return. Assuming depreciation on straight line basis, ascertain which project should be accepted. Present value of an annuity of ₹ 1 for 8 years = 5.335 and present value of ₹ 1 at the end of 8 years = 0.467, both at the discount rate of 10%. (7)

(b) A newly formed company has applied for a short-term loan to a commercial bank for financing its working capital requirement. As a Cost Accountant, you are asked by the bank to prepare an estimate of the requirement of the working capital for that company. Add 10% to your estimated figure to cover unforeseen contingencies. The information about the projected Profit and Loss Account of the company is as under :

₹		
Sales		21,00,000
Cost of goods sold		<u>15,30,000*</u>
Gross profit		5,70,000
Administrative expenses	1,40,000	
Selling expenses	<u>1,30,000</u>	<u>2,70,000</u>
Profit before tax		3,00,000
Provision for tax		1,00,000

*Cost of goods sold has been derived as :

Materials used	8,40,000	
Wages and manufacturing expenses	6,25,000	
Depreciation	<u>2,35,000</u>	17,00,000
Less : Stock of finished goods (10 % produced, not yet sold)		<u>1,70,000</u>
		15,30,000

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The figures given above relate only to the goods that have been finished and not to work-in-progress; goods equal to 15% of the year's production (in terms of physical units) are in progress on an average, requiring full materials but only 40% of the other expenses. The company believes in keeping two months' consumption of material in stock.

All expenses are paid one month in arrears' suppliers of material extend 1 ½ months' credit; sales are 20% cash; rest are at two months' credit, 70% of the income-tax has to be paid in advance in quarterly installments.

You can make such other assumptions as you deem necessary for estimating working capital requirement. **(9)**