Paper 8 – Cost Accounting & Financial Management

Section A – Cost Accounting – Prime Costs & Overheads
(Full Marks : 60)

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

1. **Answer the following** **[6 x 2 =12]**

(a) What are the items to be 'excluded' for the purpose of determining valuation of materials as per CAS -6?

(b) Consider the following data pertaining to the production of a company for a particular month :

Opening stock of raw material	₹ 11,570
Closing stock of raw material	₹ 10,380
Purchase of raw material during the month	₹ 1,28,450
Total manufacturing cost charged to product	₹ 3,39,165

Factory overheads are applied at the rate of 45% of direct labour cost.
Calculate the amount of factory overheads applied to production.

(c) 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.

(d) A company is currently operating at 80% capacity level. The production under normal capacity level is 1,50,000 units. The variable cost per unit is ₹14 and the total fixed costs are ₹ 8,00,000. If the company wants to earn a profit of ₹4,00,000, what should be the price of the product per unit ?

(e) The annual demand for a product is 6,400 units. The unit cost is ₹6 and inventory carrying cost per unit per annum is 25% of the average inventory cost. If the cost of procurement is ₹75, what is the time between two consecutive orders ?

(f) In Z Ltd. there were 680 employees on the rolls at the beginning of a year and 620 at the end. During the year 30 persons left service. The company has computed its labour turnover rates under flux method is 8%. What is the number of accessions during the period ?

2. (a) A re-roller produced 400 metric tons of M.S. bars spending ₹ 36,00,000 towards materials and ₹ 6,20,000 towards rolling charges. Ten percent of the output was found to be defective, which had to be sold at 10% less than the price for good production. If the sales realization should give the firm an overall profit of 12.5% on cost, find the selling price per metric ton of both the categories of bars. The scrap arising during the rolling process fetched a realization of ₹ 60,000. **[4]**

(b) The cost structure of an article, the selling price of which is ₹ 45,000 is as follows :

Direct Materials	50%
Direct Labour	20%
Overheads	30%

An increase of 15% in the case of materials and of 25% in the cost of labour is anticipated. These increased costs in relation to the present selling price would cause a 25% decrease in the amount of profit per article.

Your are required

(i) To prepare a statement of profit per article at present, and

(ii) The revised selling price to produce the same percentage of profit to sales as before. **[3+3=6]**

(c) What do you understand by the term 'pre-determined rate of recovery of overheads'? How do over –absorption and under-absorption of overheads arise and how are they disposed off in Cost Accounts? **[2+1+3=6]**

3. (a) A company has the option to procure a particular material from two sources:
Source I assures that defectives 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. **[4]**

(b) A skilled worker in XYZ Ltd. Is paid a guaranteed wage rate of ₹ 30 per hour. The standard time per unit for a particular product is 4 hours. P, a machine man, has been paid wages under the Rowan Incentive Plan and he had earned an effective hourly rate of ₹ 37.50 on the manufacture of that particular product.

What could have been his total earnings and effective hourly rate, had he been put on Halsey Incentive Scheme (50%)? **[4]**

(c) Purchase of Materials ₹5,00,000 (inclusive of Trade Discount ₹8,000); Import Duty paid ₹45,000; Freight inward ₹62,000 ; Insurance paid for import by air ₹ 28,000; Rebates allowed ₹10,000; Cash discount ₹3,000; CENVAT Credit refundable ₹7,000; Abnormal Loss of Materials ₹14,000; Price variation due to computation of cost under standard rates ₹1,500. Compute the landed cost of material. **[4]**

(d) What are the methods of measuring labour turnover? **[4]**

4. (a) PQR Ltd has its own power plant, which has two users, Cutting Department and Welding Department. When the plans were prepared for the power plant, top management decided that its practical capacity should be 1,50.000 machine hours. Annual budgeted practical capacity fixed costs are ₹9,00,000 and budgeted variable costs are ₹4 per machine-hour. The following data are available:

	Cutting Department	Welding Department	Total
Actual Usage in 2011-12 Machine hours)	60,000	40,000	1,00,000
Practical capacity for each department (machine hours)	90,000	60,000	1,50,000

Required

(i) Allocate the power plant's cost to the cutting and the welding department using a single rate method in which the budgeted rate is calculated using practical capacity and costs are allocated based on actual usage.

(ii) Allocate the power plant's cost to the cutting and welding departments, using the dual - rate method in which fixed costs are allocated based on practical capacity and variable costs are allocated based on actual usage,

(iii) Allocate the power plant's cost to the cutting and welding departments using the dual-rate method in which the fixed-cost rate is calculated using practical capacity, but fixed costs are allocated to the cutting and welding department based on actual usage. Variable costs are allocated based on actual usage.

(iv) Comment on your results in requirements (i), (ii) and (iii). **[3+3+3+2=11]**

(b) Explain the advantages that would accrue in using the LIFO method of pricing for the valuation of raw material stock. **[4]**

5. (a) The finishing shop of a company employs 60 direct workers. Each worker is paid ₹ 400 as wages per week of 40 hours. When necessary, overtime is worked upto a maximum of 15 hours per week per worker at time rate plus one-half as premium. The current output on an average is 6 units per man hour which may be regarded as standard output. If bonus scheme is introduced, it is expected that the output will increase to 8 units per man hour. The workers will, if necessary, continue to work Overtime upto the specified limit although no premium on incentives will be paid.

The company is considering introduction of either Halsey Scheme or Rowan Scheme of Wage Incentive system. The budgeted weekly output is 19,200 units. The selling price is ₹ 11 per unit and the direct Material Cost is ₹ 8 per unit. The variable overheads amount to ₹ 0.50 per direct labour hour and the fixed overhead is Rs, 9,000 per week.

Prepare a Statement to show the effect on the Company's weekly Profit of the proposal to introduce (a) Halsey Scheme, and (b) Rowan Scheme. **[8]**

(b) A Ltd. Co. has capacity to produce 1,00,000 units of a product every month. Its works cost at varying levels of production is as under:

Level	Works cost per unit
	₹
10%	400

20%	390
30%	380
40%	370
50%	360
60%	350
70%	340
80%	330
90%	320
100%	310

Its fixed administration expenses amount to ₹ 1,50,000 and fixed marketing expenses amount to ₹ 2,50,000 per month respectively. The variable distribution cost amounts to ₹ 30 per unit.

It can market 100% of its output at ₹ 500 per unit provided it incurs the following further expenditure:

a. It gives gift items costing, ₹ 30 per unit of sale;
b. It has lucky draws every month giving the 1st prize of ₹ 50,000; 2nd prize of ₹ 25,000, 3rd prize of ₹ 10,000 and three consolation prizes of Rs, 5,000 each to customers buying the product.
c. It spends ₹ 1,00,000 on refreshments served every month to its customers;
d. It sponsors a television programme every week at a cost of ₹ 20,00,000 per month.

It can market 30% of its output at ₹ 550 per unit without incurring any of the expenses referred to in (a) to (d) above.

Advise the company on its course of action. Show the supporting cost sheets. **[8]**

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) M/s. Sagar Electrical Appliances furnish the following information –
Calculate net cash flow from financing activities :

Particulars	31.12.2011	31.12.2012
Equity share capital	2,00,000	4,50,000
10% debentures	1,00,000	-
6% preference shares	-	3,00,000

Additional information :

(i) Interest paid on debentures ₹ 5,000/-
(ii) Dividend paid on equity shares ₹ 40,000/-
(iii) Bonus shares were issued to existing shareholders in the ratio of 4:1 during the year.[**2**]

(b) A firm has sales of ₹ 40 lakhs; variable cost of ₹ 25 lakhs; fixed cost of ₹ 6 lakhs; 10% debt of ₹ 30 lakhs; and equity capital of ₹ 45 lakhs. Calculate operating and financial leverage.[**2**]

(c) Explain the role of 'Operational Efficiency' in the determination of working capital requirement. **[2]**

(d) What is Financial Risk ? How does it arise ? **[2]**

7. (a) The following is the capital structure of Simons Company Ltd. as on 31.12.2012:

	₹
Equity shares: 10,000 shares (of ₹ 100 each)	10,00,000
10% Preference Shares (of ₹ 100 each)	4,00,000
12% Debentures	6,00,000
	20,00,000

The market price of the company's share is ₹ 110 and it is expected that a dividend of ₹ 10 per share would be declared for the year 2012. The dividend growth rate is 6%:

(i) If the company is in the 40% tax bracket, compute the weighted average cost of capital.

(ii) Assuming that in order to finance an expansion plan, the company intends to borrow a fund of ₹ 10 lakh bearing 14% rate of interest, what will be the company's revised weighted average cost of capital? This financing decision is expected to increase dividend from ₹ 10 to ₹ 12 per share. However, the market price of equity share is expected to decline from ₹ 110 to ₹ 105 per share. **[2+4=6]**

(b) Following are the data on a capital project being evaluated by the management of X Ltd.

	Project M ₹
Annual cost saving	4,00,000
Useful life	4 years
I.R.R.	15%
Profitability Index (PI)	1.064
NPV	?
Cost of capital	?
Cost of project	?
Payback	?
Salvage value	0

Find the missing values considering the following table of discount factor only:

Discount factor	15%	14%	13%	12%
1 year	0.869	0.877	0.885	0.893
2 years	0.756	0.769	0.783	0.797
3 years	0.658	0.675	0.693	0.712
4 years	0.572	0.592	0.613	0.636
	2.855	2.913	2.974	3.038

[6]

(c) S Ltd. has ₹ 10,00,000 allocated for capital budgeting purposes. The following proposals and associated profitability indexes have been determined:

Project	Amount ₹	Profitability Index
1	3,00,000	1.22
2	1,50,000	0.95
3	3,50,000	1.20
4	4,50,000	1.18
5	2,00,000	1.20
6	4,00,000	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. **[4]**

8. (a) A newly formed company has applied to the commercial bank for the first time for financing its working capital requirements. The following information is available about the projections for the current year:

Estimated level of activity: 1,04,000 completed units of production plus 4,000 units of work-in-progress. Based on the above activity, estimated cost per unit is:

Raw material	₹ 80 per unit
Direct wages	₹ 30 per unit
Overheads (exclusive of depreciation)	₹ 60 per unit
Total cost	₹ 170 per unit
Selling price	₹ 200 per unit

Raw materials in stock: Average 4 weeks consumption, work-in-progress (assume 50% completion stage in respect of conversion cost) (materials issued at the start of the processing).

Finished goods in stock	8,000 units	
Credit allowed by suppliers	Average 4 weeks	
Credit allowed to debtors/receivables	Average 8 weeks	
Lag in payment of wages	Average 1 ½ weeks	
Cash at banks (for smooth operation) is expected to be		₹ 25,000

Assume that production is carried on evenly throughout the year (52 weeks) and wages and overheads accrue similarly. All sales are on credit basis only.

Find out the net working capital required. **[10]**

(b) Explore the interrelationship between Investment, Finance and Dividend Decisions. **[6]**

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

Balance Sheets
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 2012 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. **[12]**

(b) When a lease can be considered as a Financial Lease ? **[4]**