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) How are Normal and Abnormal Losses of material during storage treated in Cost Accounts? [2]

(b) 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, then what should be the price of the product per unit ? [2]

(c) 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. What is the amount of factory overheads applied to production ? [2]

(d) A worker has a time rate of ₹ 15/hr. He makes 720 units of component (standard time : 5 minutes/ unit) in a week of 48 hours. What is his total wages including Rowan bonus for the week ? [2]

(e) ABC Ltd. is having 400 workers at the beginning of the year and 500 workers at the end of the year. During the year 20 workers were discharged and 15 workers left the organization. During the year the company has recruited 65 workers. Of these, 18 workers were recruited in the vacancies of those leaving, while the rest were engaged for an expansion scheme. What is the labour turnover rate under separation method ? [2]

(f) What is group bonus ? [2]

2. (a) Define Explicit costs. How is it different from implicit costs? [4]

(b) A manufacturer of Surat purchased three Chemicals A, B and C from Bombay. The invoice gave the following information:

	₹
Chemical A :	12,600
Chemical B:	19,000
Chemical C:	9,500
Sales Tax	2,055
Railway Freight	1,000

Total Cost	44,155

A shortage of 200 kg in Chemical A, of 280 kg. in Chemical B and of 100 kg. in Chemical C was noticed due to breakages. At Surat, the manufacturer paid Octroi duty @ ₹ 0.10 per kg. He also paid Cartage ₹ 22 for Chemical A, ₹ 63.12 for Chemical B and ₹ 31.80 for Chemical C. Calculate the stock rate that you would suggest for pricing issue of chemicals assuming a provision of 5% towards further deterioration. [8]

(c) 'Under the Rowan Premium Bonus system, a less efficient worker can obtain same bonus as a highly efficient worker.' Discuss with suitable examples. [4]

3. (a) Discuss the treatment of overtime premium in cost accounts. [4]

(b) Selfhelp Ltd. has gensets and produces its own power. Data for power costs are as follows:-

Horse power Hours	Production deptts.		Service deptts.	
	A	B	X	Y
Needed for capacity production	10,000	20,000	12,000	8,000
Used during the month of May	8,000	13,000	7,000	6,000

During the month of May costs for generating power amounted to ₹ 9,300: of this ₹ 2,500 was considered to be fixed cost. Service Deptt. X renders service to A, B and Y in the ratio 13:6:1, while Y renders service to A and B in the ratio 31:3. Given that the direct labour hours in Deptts. A and B are 1650 hours and 2175 hours respectively, find the Power Cost per labour hour in each of these two Deptts. [6]

(c) RST Limited has received an offer of quantity discount on its order of materials as under:

Price per tone	Tones number
₹ 9,600	Less than 50
₹ 9,360	50 and less than 100
₹ 9,120	100 and less than 200
₹ 8,880	200 and less than 300
₹ 8,640	300 and above

The annual requirement for the material is 500 tonnes. The ordering cost per order is ₹12,500 and the stock holding cost is estimated at 25% of the material cost per annum.

Required

(i) Compute the most economical purchase level.

(ii) Compute EOQ if there are no quantity discounts and the price per tonne is ₹10,500.

[4+2=6]

4. (a) What is an idle capacity? What are the costs associated with it? How are these treated in product costs? [2+2+2=6]

(b) In a unit, 10 men work as a group. When the production for the group exceeds the standard output of 200 pieces per hour, each man is paid an incentive for the excess production in addition to his wages at hourly rates. The incentive is at half the percentage, the excess production over the standard bears to the standard production, Each man is paid an incentive at the rate of this percentage of a wage rate of ₹ 2 per hour. There is no relation between the individual workman's hourly rate and the bonus rate.

In a week, the hours worked are 500 hours and the total production is 1,20,000 pieces.

(i) Compute the total amount of the bonus for the week.

(ii) Calculate the total earnings of two workers A and B of the group:-
A worked 44 hours and his basic rate per hour was ₹ 2.20.
B worked 48 hours and his basic rate per hour was ₹ 1.90. [3+2=5]

(c) PQR Tubes Ltd. are the manufacturer of picture tubes for T.V. The following are the details of their operations during 2013-14.

Ordering cost	₹ 100 per order
Inventory carrying cost	20% p.a.
Cost of tubes	₹ 500 per tube
Normal usage	100 tubes per week
Minimum usage	50 tubes per week
Maximum usage	200 tube per week
Lead time to supply	6 – 8 weeks

Required

Economic order quantity. If the supplier is willing to supply quarterly 1,500 units at a discount of 5%, is it worth accepting? [2+3=5]

5. (a) Bonus paid under the Halsey Plan with Bonus at 50% for the time saved equals the bonus paid under the Rowan System. When will this statement hold good? (Your answer should contain the proof). [4]

(b) In a factory, overhead of a particular department are recovered on the basis of ₹ 5 per machine hour. The total expenses incurred and the actual machine hours for the department for the month of August were ₹ 80,000 and 10,000 hours respectively. Of the amount of ₹ 80,000, ₹ 15,000 became payable due to an award of the Labour Court and ₹ 5,000 was in respect of expenses of the previous year booked in the current month (August). Actual production was 40,000 units of which 30,000 units were sold. On analysing the reasons, it was found that 60% of the under absorbed overhead was due to defective planning and the rest was attributed to normal cost increase. How would you treat the under absorbed overhead in the cost accounts? [6]

(c) The cost accountant of Y Ltd. has computed labour turnover rates for the quarter ended 31st March, 2013 as 10%, 5% and 3% respectively under Flux method, 'Replacement method' and 'Separation method'. If the number of workers replaced during that quarter is 30, find out the number of (1) workers recruited and joined and (2) workers left and discharged. [6]

Section B–Financial Management

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

6. (a) Z Ltd. Is a manufacturing company having asset turnover ratio of 2 and debt- asset ratio of 0.60 for the year ended 31st March, 2013 . If its net profit margin is 5%, what is the Return on Equity (ROE) of the company ? [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 will be its working capital ? [2]

(c) The balance sheet of ABC Ltd. Shows the capital structure as follows :
2,50,000 equity shares of ₹ 10 each; 32,000, 12% preference shares of ₹ 100 each; general reserve of ₹ 14,00,000; securities premium account ₹ 6,00,000; 25,000, 14% fully secured non-convertible debentures of ₹ 100 each.; term loans from financial institutions ₹ 10,00,000.
What is the leverage of the firm ? [2]

(d) ABC Ltd. Is selling its products on credit basis and its customers are associated with 5% credit risk. The annual turnover is expected at ₹ 5,00,000 if credit is extended with cost of sales at 75% of sale value. The cost of capital of the company is 15%. What is the net profit of the company ? [2]

7. (a) The following is the condensed Balance sheet of NHPC Ltd. at the beginning and end of the year. [12]

Balance Sheets
As at ………………..

Particulars	31.12.2012	31.12.2013
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 2013 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 2013. [12]

(b) Do the profitability index and the NPV criterion of evaluating investment proposals lead to the same acceptance – rejection and ranking decisions? In what situations will they give conflicting results? [4]

8. (a) DL Services is in the business of providing home Services like plumbing, sewerage line cleaning etc. There is a proposal before the company to purchase a mechanized sewerage cleaning line for a sum of ₹ 20 lacs. The life of the machine is 10 years. The present system of the company is to use manual labour for the job. You are provided the following information:

Cost of machine	20 lakhs
Depreciation	20% p.a. straight line
Operating cost	₹ 5 lacs per annum
Present system	
Manual labour	200 persons
Cost of Manual labour	₹ 10,000 (ten thousand) per person per annum

The company has an after tax cost of funds of 10% per annum. The applicable rate of tax inclusive of surcharge and cess is 35%.

Based on the above you are required to:

(i) State whether it is advisable to purchase the machine.

(ii) Compute the savings/additional cost as applicable, if the machine is purchased. [2+3=5]

(b) Write short note on Inflation and financial management. [5]

(c) Moderate Industries Ltd. is desirous of assessing its working capital requirements for the next year. The finance manager has collected the following information for the purpose.

Estimated cost per unit of finished product

Particulars	₹
Raw materials	90
Direct labour	50

Manufacturing and administrative overhead (excluding depreciation)	40
Depreciation	20
Selling overheads	30
Total cost	230

The product is subject to excise duty of 10% (levied on cost of production) and is sold at ₹ 300 per unit.

Additional information :

i. Budgeted level of activity is 1,20,000 units of output for the next year.

ii. Raw material cost consists of the following :
Pig iron ₹ 65 per unit, Ferro alloys 15 per unit, and Cast iron borings 10 per unit.

iii. Raw materials are purchased from different suppliers, extending different credit period.
Pig iron – 2 months, Ferro alloys – ½ month, and cost iron borings – 1month.

iv. Product is in process for a period of ½ month. Production process requires full unit (100%) of pig iron and ferro alloys in the beginning of production' cast iron boring is required only to the extent of 50% in the beginning and the remaining is needed at a uniform rate during the process. Direct labour and other overheads accrue similarly at a uniform rate throughout production process.

v. Past trends indicate that the pig iron is required to be stored for 2 months and other materials for 1 month.

vi. Finished goods are in stock for a period of 1 month.

vii. It is estimated that one-fourth of total sales are on cash basis and the remaining sales are on credit. The past experience of the firm has been to collect the credit sales in 2 months.

viii. Average time-lag in payment of all overheads is 1 month and ½ months in the case of direct labour.

ix. Desired cash balance is to be maintained at ₹ 10 lakhs.

You are required to determine the amount of net working capital of the firm. State your assumptions, if any. [6]

9. (a) Avon Electrical Ltd wishes to determine the weighted average cost of capital for evaluating capital budgeting projects. You have been supplied with the following information to calculate the value of K_o for the company.

BALANCE SHEET as on March 31

Liabilities		Assets	
Current liabilities	₹ 9,00,000	Sundry assets	₹39,00,000
Debentures	9,00,000		
Preference shares	4,50,000		
Equity Shares	12,00,000		
Retained earnings	4,50,000		
	₹ 39,00,000		₹39,00,000

Anticipated external financing information:

(i) 20 years, 8% Debentures of ₹2,500 face value, redeemable at 5% premium, sold at par, 2 % flotation costs.

(ii) 10% Redeemable Preference Shares: Sale price ₹100 per share, 2% flotation costs.

(iii) Equity shares: Sale price ₹ 115 per share; flotation costs would be ₹ 5 per share.

(iv) The corporate tax rate is 35% and expected equity dividend growth is 5% per year.

(v) The expected dividend at the end of the current financial year is ₹ 11 per share. Assume that the company is satisfied with its present capital structure and intends to maintain it. [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) Write the basic propositions and the assumptions of the MM Approach. [4]