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.

Question.1

(a) **The repairs and maintenance of machinery in factory is found to be a semi variable cost having some relationship with the no. of machine hours run. It was ₹ 17,500 during October, 2013 for 7500 machine hours worked and ₹ 15,400 for November, 2013 when only 5,400 machine hours were worked. What will be the budgeted cost of repairs and maintenance for December 2013 when 6,200 machine hours are expected to be worked? [2]**

(b) **If the ordering cost per order is ₹ 40, carrying cost is 10% of average inventory value, purchase cost is ₹ 10 per unit and Economic Order Quantity (EOQ) for the product is 800 units; What is the expected annual demand for the product? [2]**

(c) **The standard time required per unit of a product is 20 minutes. In a day of 8 working hours a worker gives an output of 30 units. If he gets a time rate of ₹ 20, then what will be the total earning under Halsey Scheme? [2]**

(d) **Define profit centre. [2]**

(e) **Differentiate between Job Evaluation and Merit Rating. [2]**

(f) **What is the basis for cost classification as per CAS-1? [2]**

Question.2

(a) **The following are the costing records for the year 2012 of a manufacturing Company.**
Production 1,00,000 units; Cost of raw materials ₹ 20,00,000; Labour cost ₹ 12,00,000; Factory overheads ₹ 8,00,000; Office overheads ₹ 4,00,000; Selling Expenses ₹ 1,00,000, Rate of Profit 25% on the selling price.
The manufacturing Company decided to produce 1,50,000 units in 2013. It is estimated that the cost of materials will increase by 15%, the labour cost will increase by 10%, 50% of the overhead charges are fixed and the other 50% are variable. The selling expenses per unit will be reduced by 20%. The rate of profit will remain the same.
Prepare a cost statement for the year 2012 and 2013 showing the total profit and selling price per unit. [4+6]

(b) **State the Treatment of the following Special Items:**
(i) Insurance Charges
(ii) Spoiled Work [2+2]

(c) **50 items are required everyday for a machine. Fixed cost of ₹ 50 per order is incurred for placing an order. The inventory carrying cost per item amounts to ₹ 0.02 per day. The lead period is 32 days. Compute: Economic Ordering Quantity. [2]**

Question.3

(a) A company makes components for television sets using two service departments and two production departments. The inter-departmental relationships and overhead costs are given below.

	Percentage of Service provided to			
From:	**Maintenance**	**Scheduling**	**Moulding**	**Assembly**
Maintenance	**-**	**10 %**	**40 %**	**50 %**
Scheduling	**20 %**	**-**	**50 %**	**30 %**
Total Overhead Cost (₹)	**7,50,000**	**4,00,000**	**3,78,000**	**2,76,000**

You are required to show the amount of Scheduling Department cost and Maintenance Department cost to be allocated to the Production Department, using Simultaneous Equation Method. [6]

(b) The Standard labour time required for the production of a certain component has been fixed as 4 hours. An incentive scheme was introduced recently to raise labour productivity. The relevant details of the scheme are as follows:

Efficiency	Incentive as a percentage of Basic Wage
Below 100%	**No incentive**
100 % (ie 4 hours / unit)	**10%**
Above 100%	**1% additional incentive for every 1% increase in efficiency above 100%, fractions excluded**

Four Workers A, B, C and D produced 16, 12, 14 and 10 units respectively in a particular week of 48 hours. The basic wages of all workers is ₹ 15 per hour.
Calculate the efficiency, incentive bonus, total earnings and labour cost per unit in respect of each of the four workers. [2+2+2+2]

(c) List out the duties of Store Keeper. [2]

Question.4

(a) A manufacturing unit has pre-determined overhead recovery rates as 400% on direct wages, 20% on works cost and 25% on cost of production for works expenses, management expenses and commercial expenses respectively.
At the end of the year, it has been found that the works overhead stands unabsorbed to the extent of 30% of the total productive wages, management overhead shows under recovery of one-eighth of the absorbed amount, and the recovery of commercial expenses result in an over absorption of the total amount absorbed.
If the prime cost of the three jobs is as under, find the profit / loss on the respective selling prices (both on the basis of standard cost and on the basis of full absorption overheads)

Costs	Job A (₹)	Job B (₹)	Job C (₹)
Direct Material	**45.50**	**32.60**	**26.80**
Direct Wages	**15.20**	**8.60**	**7.20**
	60.70	**41.20**	**34.00**
Selling Price	**200.00**	**130.00**	**90.00**

[5+5]

(b) The Budgeted annual production of a company is 1,20,000 units, each unit requiring 2½ hours at an hourly wage rate of ₹ 15. Currently the average efficiency of the production workers is only 60%. The management has a scheme to raise this to 75 %. The scheme involves realigning the machinery and intensive training of the production workers, at a onetime cost of ₹ 10 lakhs. The scheme also proposes to raise the wage rate to ₹ 16 to

ensure the full co-operation of workers. Calculate the scheme and state whether it can be accepted. [3+1]

(c) XYZ Co. 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 company. Calculate the Labour Turnover rate under 'separation method'. [2]

Question.5

(a) For the manufacture of certain product two components X and Y are used. The following particulars about these components are available:

	X	Y
Normal usage (Per Week)	60 nos.	60 nos.
Maximum usage (Per week)	80 nos.	80 nos.
Minimum usage (Per week)	30 nos.	30 nos.
Reorder quantity	400 nos.	600 nos.
Reorder period	4 to 6 weeks	2 to 4 weeks

You are required to calculate for each component:
(i) Reorder level
(ii) Minimum level
(iii) Maximum level
(iv) Average stock level. [2x4=8]

(b) A company manufactures a standard component. The detail of current operation of the company is as follows.

Number of workers employed	100
Weekly working hours	48
Average number of hours lost due to idle time per employee per week	8
Standard time required per unit	2 Hours
Hourly wage Rate	₹ 15
Current Level of Efficiency	80%

For every unit sold the company is getting a cash profit of ₹ 120 before charging labour cost.
In view of the increased demand for the product, the company has come to an agreement with the labour union to raise the wage rate by ₹ 3 per hour in return for the workers reducing idle time by 4 hours and raising operational efficiency to 90%
You are required to calculate:
(i) Net profit at current operation
(ii) Net profit after the agreement [2.5x2=5]

(c) A manufacturing organization has imported four types of materials. The invoice reveals the following data:

	Quantity kgs.	Rate US $ per kg.
Material		
P	1,000	1.50
Q	2,000	1.25
R	1,500	2.00
S	3,000	1.00

Import duty 23% of invoice value
Insurance 2% of invoice value
Freight and cleaning ₹ 30,000
Exchange Rate US $ 1= ₹ 16.00

50% of the materials imported are issued to production centers. While determining the value of closing stock 10% allowance is provided to cover up storage loss. Determine the value of closing stock of each type of materials. [3]

Section B–Financial Management

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

Question.6.Choose the most appropriate one from the stated options.

(a) A bond costing @ ₹ 800 is redeemable after 5 years @ ₹ 1,000. No interest is to be received and the discounting rate is 10%. What would be the NPV of bond? [2]
(a) ₹ 720
(b) ₹ (720)
(c) ₹ (179)
(d) ₹ 179

(b) The following data relate to SSCO Ltd:

	₹
Earnings before interest and tax (EBIT)	10,00,000
Fixed Cost	20,00,000
Earnings before tax (EBT)	8,00,000

Required combined leverage will be….. [2]
(a) 2.75
(b) 3.75
(c) 4.75
(d) 0.75

(c) The current market price of an equity share of a company is ₹ 90. The current dividend per share is ₹ 4.50. In case the dividends are expected to grow at the rate of 7%, then the cost of equity capital will be…. [2]
(a) 10%
(b) 11%
(c) 12%
(d) 13%

(d) A company's expected annual net operating income (EBIT) is ₹ 50,000. The company has ₹ 2,00,000, 10% debentures. The equity capitalization rate (K_e) of the company is 12.5%. Find the value of the firm under Net Income approach. [2]
(a) ₹ 4,80,000
(b) ₹ 4,60,000
(c) ₹ 4,45,000
(d) ₹ 4,40,000

Question.7

(a) How does financial leverage increase the potential reward to the shareholders? [6]

(b) ABC Limited has made plans for the year 2013-2014. It is estimated that the Company will employ total assets of ₹ 25,00,000; 30% of assets being financed by debt at an interest cost of 9%p.a. The direct cost for the year are estimated at ₹ 15,00,000 and all other

operating expenses are estimated at ₹ 2,40,000. The sales revenue is estimated at ₹ 22,50,000. Tax rate is assumed to be 50%. Required to calculate:

(i) Net profit margin
(ii) Return on assets
(iii) Assets turnover and
(iv) Return on equity. [1.5 x 4 = 6]

(c) Discuss about the evolution of Zero Based Budgeting and state its advantages. [1+3]

Question.8

(a) The Beta co-efficient of Target Ltd. is 1.4. The Company has been maintaining 7% rate of growth in dividends. The last dividend paid was ₹ 4 per share. Return on Government securities is 10%. Return on market portfolio is 15%. The current market price of one share of Target Ltd. is ₹ 36.
What will be the equilibrium price per share of Target Ltd.? [3]

(b) A chemical company is considering replacing an existing machine with one costing ₹ 65,000. The existing machine was originally purchased two years ago for ₹ 28,000 and is being depreciated by the straight line method over its seven-year life period. It can currently be sold for ₹ 30,000 with no removal costs. The new machine would cost ₹ 10,000 to install and would be depreciate over five years. The management believes that the new machine would have a salvage value of ₹ 5,000 at the end of year 5. The management also estimates an increase in net working capital requirement of ₹10,000 as a result of expanded operations with the new machine. The firm is taxed at a rate of 55% on normal income and 30% on capital gains. The company's expected after-tax profits for next 5 years with existing machine and with new machine are given as follows:

₹

	Expected after-tax profits	
Year	With existing machine	With new machine
1	2,00,000	2,16,000
2	1,50,000	1,50,000
3	1,80,000	2,00,000
4	2,10,000	2,40,000
5	2,20,000	2,30,000

(a) Calculate the net investment required by the new machine.
(b) If the company's cost of capital is 12%, determine whether the new machine should be purchased. [3+6]
(c) List out the importance of Cash Management. [4]

Question.9

(a) From the following figures, prepare a statement showing the changes in the working capital and fund flow statement during the year 2013:-

Assets	Dec.31,2012	Dec.31,2013
Fixed Assets (net) ₹	5,10,000	6,20,000
Investment	30,000	80,000
Current Assets	2,40,000	3,75,000
Discount on debentures	10,000	5,000
	7,90,000	10,80,000

Liabilities		
Equity share capital	3,00,000	3,50,000
Preference share capital	2,00,000	1,00,000
Debentures	1,00,000	2,00,000
Reserves	1,10,000	2,70,000
Provision for doubtful debts	10,000	15,000
Current liabilities	70,000	1,45,000
	7,90,000	10,80,000

You are informed that during the year:

(a) A machine costing ₹ 70,000 book value ₹ 40,000 was disposed of for ₹ 25,000.

(b) Preference share redemption was carried out at a premium of 5% and

(c) Dividend at 10% was paid on equity share for the year 2012.

Further:

(i) The provision for depreciation stood at ₹ 1,50,000 on 31.12.12 and at ₹ 1,90,000 on 31.12.13; and

(ii) Stock which was valued at ₹ 90,000 as on 31.12.12; was written up to its cost, ₹ 1,00,000 for preparing Profit and Loss account for the year 2013. [3+5]

(b) A Company provides the following data:

	Cost per unit (₹)
Raw materials	52.00
Direct labour	19.50
Overheads	39.00
Total cost	110.50
Profit	19.50
Selling price	130.00

The following additional information is available:-

(a) Average raw materials in stock: one month.

(b) Average materials in process: half-a-month

(c) Average finished goods in stock: one month

(d) Credit allowed by suppliers: one month

(e) Credit allowed to debtors: two month

(f) Time lag in payment of wages: one and a half weeks.

(g) Overheads: one month

(h) One-fourth of sales are on cash basis.

(i) Cash balance is expected to be ₹ 1,30,000

You are required to prepare a statement showing the working capital needed to finance a level of activity of 70,000 units of annual output. The production is carried evenly throughout the year and wages and overheads accrue similarly. (Calculation is made on the basis of 30 days a month and 52 weeks a year.) [8]