Paper 8 : Cost Accounting and Financial Management

Full Marks: 100

Time : 3 hours

This question paper is divided into two sections, Section A- Cost Accounting (60 marks) and Section B - Financial Management (40 marks).

From Section A: Question no. 1 is compulsory and answer any 3 from the rest questions in Group A. From Section B: Question no. 6 is compulsory and answer any 2 from the rest questions in Group B.

Section A - Cost Accounting (Full Marks:60)

Question No.1: (Compulsory question)

Answer the followings:

(a) Define Cost Accountancy, Costing and Cost Accounting [3]

(b) Explain Cost Centre, Responsibility Centre and Profit Centre [3]

(c) Distinguish between Cost Control and Cost Reduction [4]

(d) State Perpetual Inventory System [2]

Question No.2:

(a) State the advantages of Just-in-Time. [4]

(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 $\overline{\mathbf{x}}$ 100 as compared to Source I. The defective units of material can be rectified for use at a cost of $\overline{\mathbf{x}}$ 5 per unit. You are required to find out which of the two sources is more economical. [7]

(d) Average lead time - 10 days; maximum lead time - 15 days, minimum lead time - 6 days and for emergency purchases - 4 days. Average consumption - 15 units per day and maximum consumption - 20 units per day. Calculate Danger Level. [2]

Question No.3:

(a) A fire occurred in the factory premises on September 30,2013. Majority of the accounting records have been destroyed. Certain accounting records were kept in another building. They reveal the following for the period September 1,2013 to September 30, 2013.

(i) Direct materials purchased ₹ 2,50,000 ;

(ii) Work-in-process as on 01-09-2013 - ₹ 40,000 ;

(iii) Direct Materials inventory as on 01-09-2013 - ₹ 20,000;

(iv) Finished goods inventory as on 01-09-2013 - ₹ 37,750;

(v) Indirect manufacturing costs - 40% of conversion cost;

(vi) Sales Revenues - ₹ 7,50,000;

(vii) Direct manufacturing labour - ₹ 2,22,250;

(viii) Prime Costs - ₹ 3,97,750;

(ix) Gross margin percentage based on revenues - 30%;

(x) Cost of goods available for sale - ₹ 5,55,775

The loss is fully covered by insurance company. The insurance company wants to know the historical cost of inventories as a basis for negotiating a settlement, although the settlement is actually to be based on replacement cost, not historical cost.

Calculate : (i) Finished goods inventory as on 30-09-2013; (ii) Work-in-progress as on 30-09-2013 and (iii) Direct Materials inventory as on 30-09-2013. [8]

(b) Raw materials "X" costing ₹ 150 per kg, and "Y" costing ₹ 90 per kg are mixed in equal proportions for making Product P1. 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 "Y" is not easily available and substitute raw material "Z" has been found for "Y" costing ₹ 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 "X" and "Z'. [8]

Question No.4:

(a) A machinery was purchased from a manufacturer who claimed that his machine could produce 36.5 tons in a year consisting of 365 days. Holidays, breakdown, etc, were normally allowed in the factory for 65 days. Sales were expected to be 25 tons during the year and the plant actually produced 25.2 tons during the year.

You are required to state the following figures :(a) rated capacity; (b) practical capacity (iii) normal capacity (iv) actual capacity. [4]

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

(c) The capacity usage ratio and the capacity utilization ratio in respect of machine for a particular month is 80% and 90% respectively. The available working hours in a month is 200 hours. The break-up of idle time is as follows:

Waiting time for job - 5 hours; breakdown - 4 hours; waiting time for tools - 3 hours. Calculate the idle time cost and present the same in a tabular form when the hourly fixed cost of running the machine is ₹ 8.00 [5]

(d) 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 the quarter is 30, find out the number of workers (i) recruited and joined and (ii) workers left and discharged. [5]

Question No.5:

(a) Distinguish between cost allocation and cost absorption. [2]

(b) In a factory bonus to workman is paid according to Rowan Plan. Time allotted for a job is 40 hours and the normal rate of wages is $\overline{\mathbf{x}}$ 1.25 per hour. The factory overhead charges are 50 paise per hour for the hours taken. The factory cost of a work order, executed by a worker is $\overline{\mathbf{x}}$ 161.875. The cost of material in each case is $\overline{\mathbf{x}}$ 100. Calculate the hours of time taken by the workman to complete the work order. [6]

(c) 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.

Section B – Financial Management (Full Marks: 40)

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

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

- a) Durga Farm Supplies has an 8 per cent return on total assets of ₹ 3, 00,000 and a net profit margin of 5 per cent. Its sales are then
 - i) ₹ 37,50,000
 - ii) ₹ 4,80,000
 - iii) ₹ 3,00,000
 - iv) ₹15,00,000
- b) A company issues a new 15 per cent debentures of ₹ 1,000 face value to be redeemed after 10 yea` The debenture is expected to be sold at 5 per cent discount. It will involve floatation costs of 2 · 5 per cent of face value. The company's tax rate is 35 per cent. The cost of debt using short-cut method would be
 - i) 10.9%;
 - ii) 10.21 %;
 - iii) 10.44%;
 - iv) 10.76%.
- c) The capital structure of a company is as under :

3, 00,000 Equity Shares of ₹ 10 each, 32,000, 12% Preference Shares of ₹ 100 each, General Reserve ₹ 15, 00,000, Securities Premium Account ₹ 5, 00,000, 25,000, 14% Fully Secured Debentures of ₹ 100 each, Term Loan of ₹ 13,00,000. Based on these, the leverage of the company is

- i) 60.22%;
- ii) 58.33%;
- iii) 55.21%;
- iv) 62.10%.
- d) From the following, what is the amount of sales of A Ltd? Financial Leverage 3:1; interest ₹ 200; Operating Leverage -4:1; Variable Cost as a % of sales- 66.67%.
 - i) ₹ 3,600
 - ii) ₹ 6,300
 - iii) ₹ 6,030
 - iv) ₹ 3,060

[2×4=8]

7. 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%

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Total Assets Turnover	0.3 times
Inventory turnover	4 times
Average Collection period (a 360 days year)	20 days
Current Ratio	1.35
Long-term Debt to Equity	45%

Balance Sheet

Creditors	Ś	Cash	Ś
Long-term debt	Ś	Debtors	Ś
Shareholder' funds	Ś	Inventory	Ś
		Fixed assets	Ś

[16]

8.

a) The following information relates to Rays Ltd.

Earning of th company	e ₹10,00,000	Rate of return on investment	15%
Dividend payout ratio	60%	Equity capitalization rate	12%
No. of shar outstanding	es 2,00,000		

- 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?

[3+3=6]

- b) Sampa Ltd is evaluating a project costing ₹ 20 lakhs. The Project generates savings of ₹ 2.95 lakhs per annum to perpetuity. The business risk of the project warrants a rate of return of 15%.
 - i) Calculate Base case NPV of the project assuming no tax.
 - ii) Assuming Tax Rate of 30% with 12% Cost of Debt constituting 30% of the cost of the project, determine Adjusted Present Value.
 - iii) Find out minimum acceptable Base Case NPV, as well as Minimum IRR.

[3+3+4=10]

9.

- a) Explain the major steps in the capital budgeting process.
- [4]
- **b)** A financial analyst has been asked to appraise Green LTD., an IT company in terms of the future cash generating capacity. He has projected the following after-tax cash flows:

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Year	1	2	3	4	5
Cash Flows (₹ in lakh)	352	96	128	172	234

It is further estimated that beyond 5th year, cash flows will perpetuate at a constant growth rate of 7% per annum, mainly on account of inflation. The perpetuate cash flow is estimated to ₹ 2,552 lakh at the end of the 5th year.

Additionally the following information are available:

- i) The cost of capital is 25%.
- ii) The company has outstanding debt of ₹ 724 lakh and cash/bank balance of ₹ 542 lakh.
- iii) The number of outstanding shares of the company is 30.30 lakh.

Requirements:

- a. What is the value of green Ltd. in terms of expected future cash flows?
- b. Calculate the value of shareholde`
- c. The company has received a takeover bid of ₹ 402 per share. Is it good offer?

[4+2+2=8]

c) Briefly Explain the Stochastic (Miller-Orr) Model. Also mention its limitations.

[4]