

Total No. of Questions – 7

Total No. of Printed Pages – 12

Time Allowed – 3 Hours

Maximum Marks – 100

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Answers to questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate has not opted for Hindi Medium, his/her answers in Hindi will not be valued.

Question No. 1 is compulsory.

Answer any five questions out of the remaining six questions.

Working notes should form part of the answer.

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1. Answer the following :

- (a) A company manufactures a product from a raw material which is purchased at ₹ 96 per kg. The company incurs a handling and freight cost of ₹ 1,500 per order. The incremental carrying cost of inventory of raw material is ₹ 7.50 per kg per quarter. The annual production of the product is 2,00,000 units and 5 units are obtained from one kg. of raw material.

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You are required to:

- Calculate the Economic Order Quantity of raw materials.
- If the company proposes to rationalize placement of order on yearly basis, what percentage of discount in the price of raw materials should be negotiated ?

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- (b) XYZ Ltd. has provided the following information:

	Year 2019	Year 2020
Sales	₹ 5,00,000	?
Profit/Volume Ratio (P/V ratio)	40%	25%
Margin of Safety sales as a % of total sales	20%	15%

There is no change in sales quantity level of year 2019 and year 2020, however, there was reduction in selling price in the year 2020. XYZ Ltd. has done restructuring of business and this has resulted in substantial savings in Fixed Cost in the year 2020.

You are required to calculate the following:

- Variable Cost in Rupees for year 2019 and year 2020
 - Sales for year 2020 in Rupees
 - Break-even sales for year 2020 in Rupees
 - Fixed cost for year 2020
- (c) PQR Limited is considering investing in a project which requires a funding of ₹ 150 Crores. Finance Manager of the company has presented two financing plans for which information is as follows:

Plan – A: Equity-20%, Debt-80%

Plan – B: Equity-60%, Preference Shares-40%

The Cost of debt is 10% and the Cost of preference shares is also 10%. Tax rate is 25%. Equity shares of the face value of ₹ 100 each will be issued at a premium of ₹ 50 per share. The Expected EBIT is ₹ 60 Crores.

You are required to determine: -

- Earnings Per Share (EPS) for Plan A and Plan B
- The Financial Break-Even Point for Plan A and Plan B

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- (d) 'X' Limited has provided the following information for the year ended on 31.03.2019.

Net profit before taking into account Income tax but after taking into account the following items was ₹ 20 lakhs:

- (i) Depreciation on Fixed Assets is ₹ 5 lakhs.
- (ii) Discount on issue of Debentures written off is ₹ 30,000.
- (iii) Interest on Debentures paid is ₹ 3,50,000.
- (iv) Book value of investments is ₹ 3 lakhs (Sale of Investments for ₹3,20,000).
- (v) Interest received on investments is ₹ 60,000.
- (vi) Income tax paid during the year is ₹ 10,50,000.

Current assets and current liabilities in the beginning and at the end of the years are as detailed below:

	As on 31.03.2018	As on 31.03.2019
	₹	₹
Stock	12,00,000	13,18,000
Sundry Debtors	2,08,000	2,13,100
Bills receivable	50,000	40,000
Bills payable	45,000	40,000
Sundry Creditors	1,66,000	1,71,300
Outstanding expenses	75,000	81,800

You are required to calculate Net Cash Flow from Operating Activities according to Indirect Method as per AS-3(Revised) for the year ended 31.03.2019.

2. (a) PQR Ltd. has provided the following information for Departments A and B of its factory:-

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Preliminary Estimates of expenses (Per Annum)			
	Total (₹)	Dept A (₹)	Dept B (₹)
Power	15,000	-	-
Spare parts	8,000	3,000	5,000
Consumable stores	5,000	2,000	3,000
Depreciation on machinery	30,000	10,000	20,000
Insurance on machinery	3,000	1,000	2,000
Indirect labour	40,000	-	-
Building maintenance	7,000	-	-

The final estimates of expenses are to be prepared on the basis of above figures after taking into consideration the following factors:

- An increase of 10 per cent in the price of spare parts.
- An increase of 20 per cent in the consumption of spare parts for Department B only.
- Increase in the straight line method of depreciation from 10 per cent on the original value of machinery to 12 per cent.
- 15 per cent increase in wage rates of Indirect Labour.

The following information is also available:

	Dept. A	Dept. B
Estimated Direct Labour hours	80,000	1,20,000
Ratio of K.W. Rating	3	2
Floor space (sq. ft.)	15,000	20,000

There are 12 holidays besides Sundays in the year. The manufacturing department works 8 hours in a day. All machines work at 90% capacity throughout the year. (Assume 365 days in a year).

You are required to work out the Machine Hour rates for Departments A and B.

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(b) A Company is capitalized as follows:

7% Preference Shares ₹ 1 each.	₹ 6,00,000
Ordinary Shares, ₹ 1 Each	<u>₹ 16,00,000</u>
Total	<u>₹ 22,00,000</u>

The following information is relevant as to its financial year just ended:

Profit (after Taxation @ 50%)	₹ 5,42,000
Ordinary Dividend paid	20%
Market Price of each Ordinary Share	₹ 4
Depreciation	₹ 2,20,000

You are required to calculate the following, showing the necessary workings:

- Dividend Yield on the Ordinary Shares
- Preference Dividend Coverage Ratio
- Ordinary Dividend Coverage Ratio
- Earnings Yield
- Price-earnings (P/E) Ratio
- Amount transferred to Reserve and Surplus
- Net Cash Flow

3. (a) A company is considering four alternative proposals for a new toy manufacturing Machine launched in the market. New machine is expected to produce approximately 25,000 toys every year. The proposals are as follows:

- Purchase and maintain the new toy manufacturing Machine and bear all related costs. These machines will run on fuel. The average cost of a Machine is ₹ 10,00,000. Life of the machine is 4 years with annual production of 25,000 toys and the Resale value is ₹ 2,00,000 at the end of the fourth year.

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- (ii) Hire from Agency-A : It can hire the machine from the Agency-A and pay hire charges at the rate of ₹ 20 per toy and bear no other cost.
- (iii) Hire from Agency-B : It can hire the machine from the Agency-B and pay hire charges at the rate of ₹ 12 per toy and also bear insurance costs. All other costs will be borne by Agency-B.
- (iv) Hire from Agency-C : Hire machine from Agency-C at ₹ 2,50,000 per year. These machines are more advanced and run on electricity and therefore, the running cost is considerably low. The company will have to bear costs of electricity, licensing fees and spare parts. However, Repairs and maintenance and Insurance cost are borne by Agency-C.

The following further details are available:

The cost of Fuel is ₹ 8 per toy, the cost of spare parts is ₹ 0.20 per toy and the cost of electricity is ₹ 2 per toy. Further, the cost of Repairs and maintenance is ₹ 0.25 per toy, the amount of licensing fees to be paid is ₹ 5,000 per machine per annum and the cost of Insurance to be paid is ₹ 25,000 per machine per annum. Consider no taxes.

You are required to :

- (i) Calculate the relative costs of four proposals on cost per toy basis.
- (ii) Rank the proposals on the basis of total cost for 25,000 toys per year.
- (iii) Recommend the best proposal to company in view of (ii) above.

- (b) KLM Ltd., has an operating profit of ₹ 46,00,000 and has employed Debt (Total Interest Charge of ₹ 10,00,000). The existing Cost of Equity and Cost of Debt to the firm are 18% and 10% respectively. The firm has a proposal before it requiring funds of ₹100 Lakhs (to be raised by issue of additional debt @ 10%) which is expected to bring additional profit of ₹19,00,000. Assume no Tax.

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You are required to find out the

- Existing Weighted Average Cost of Capital (WACC)
- New Weighted Average Cost of Capital (WACC)

4. (a) XYZ Ltd. has provided following information in respect of Process 'P' from its Cost Records :

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Work-in-process as at start of period	(₹)
– Materials	10,000
– Labour	5,000
– Overhead	5,000
Total	20,000
Cost during the period	
– Materials	50,000
– Labour	22,500
– Overhead	22,500
Total	95,000

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The following information is available from its Production Records:

Units in process as at start of period 5,000

(Degree of completion for Materials is 100% and
for Labour and Overhead is 50%)

New units introduced 25,000

Units completed 19,000

Units in process as at end of period 10,000

(Degree of completion for Materials is 100% and
for Labour and Overhead is 75%)

The degree of completion for scrapped units is 100% for Materials as well as for Labour and Overhead and units scrapped do not fetch any value. There is no normal loss in the Process 'P'.

You are required to prepare following, presuming that Average Method of inventory is used:

- (i) Statement of Equivalent Production
- (ii) Statement of Cost
- (iii) Statement of Distribution of Cost
- (iv) Process Account for Process 'P'

- (b) A chemical company is presently paying an outside firm ₹ 1 per gallon to dispose off the waste resulting from its manufacturing operations. At normal operating capacity, the waste is about 50,000 gallons per year.

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After spending ₹ 60,000 on research, the company discovered that the waste could be sold for ₹ 10 per gallon if it was processed further. Additional processing would, however, require an investment of ₹6,00,000 in new equipment, which would have an estimated life of 10 years with no salvage value. Depreciation would be calculated by straight line method.

Except for the costs incurred in advertising ₹ 20,000 per year, no change in the present selling and administrative expenses is expected, if the new product is sold. The details of additional processing costs are as follows:

Variable : ₹ 5 per gallon of waste put into process.

Fixed : (Excluding Depreciation) ₹ 30,000 per year.

There will be no losses in processing, and it is assumed that the total waste processed in a given year will be sold in the same year. Estimates indicate that 50,000 gallons of the product could be sold each year.

The management when confronted with the choice of disposing off the waste or processing it further and selling it, seeks your advice. Which alternative would you recommend? Assume that the firm's cost of capital is 15% and it pays on an average 50% Tax on its income.

You should consider Present value of Annuity of ₹1 per year @ 15% p.a. for 10 years as 5.019.

5. (a) Define the following terms in Cost Accounting:

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(i) Conversion Cost

(ii) Sunk Cost

(iii) Opportunity cost

(iv) Cost Centre

(b) Differentiate between Fixed Budget and Flexible Budget.

(c) Explain any four factors that a Venture Capitalist should consider before financing any risky project.

(d) What is Factoring ? What do you understand by Recourse basis factoring and Non-recourse basis factoring ? Explain the advantages of Factoring in brief.

6. (a) The following data has been collected from the cost records of Nee Ltd. for computing the variances for a period:-

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Particulars	Budget	Actual
Output (units)	50,000	54,000
Hours	25,000	28,000
Fixed overhead	₹ 65,000	₹ 54,000
Working days	25	26

You are required to calculate :

(i) Fixed Overhead Cost Variance

(ii) Fixed Overhead Expenditure Variance

(iii) Fixed Overhead Volume Variance

(iv) Fixed Overhead Efficiency Variance

(v) Fixed Overhead Capacity Variance

(vi) Fixed Overhead Calendar Variance

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- (b) XYZ Ltd. has started business in the year 2020-21 and has provided the under mentioned Projected Profit & Loss Account:

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	₹	₹
Sales		10,00,000
Less: Cost of Goods Sold		<u>6,12,000</u>
Gross profit		3,88,000
Administration Expenses	72,000	
Selling Expenses	<u>60,000</u>	<u>1,32,000</u>
Net Profit		2,56,000

The Cost of Goods Sold has been arrived at as under:

Materials Consumed	3,60,000
Wages & Manufacturing Expenses	2,40,000
Depreciation	<u>1,20,000</u>
	7,20,000
Less: Stock of Finished Goods (15% of goods produced not yet sold)	<u>1,08,000</u>
Cost of Goods Sold	<u>6,12,000</u>

There is no Work in progress and no opening stock of Raw material and Finished goods. The company believes in keeping materials equal to three month's consumption in stock. All expenses will be paid one month in arrear, suppliers of material will extend two months credit, sales will be 50% for cash and the rest at one month credit. The company wishes to keep ₹ 50,000 in cash.

You are required to prepare an estimate of the Requirements of Working Capital on the basis of Estimates on Cash Cost Basis. Assume no Taxes.

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7. Answer any **four** of the following:

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- (a) List out the assumptions underlying Cost-Volume-Profit Analysis.
- (b) Define Integrated Accounting System in brief. State any three essential pre-requisites of this system.
- (c)
 - (i) List out two objectives each of Time-keeping and Time-Booking in Cost Accounting.
 - (ii) Money in the future is 'Worth Less' than similar Money 'Today.' Provide any 2 reasons in support of this statement.
- (d) Explain the following:
 - (i) Inter Corporate Deposits.
 - (ii) Certificate of Deposit.
- (e) Explain the term 'Over-Capitalisation'. Also explain any two causes, two consequences, and two remedies of/for Over-Capitalisation.