Paper 10 - Cost & Management Accounting and Financial Management

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Full Marks: 100 **Time allowed: 3 hours**

This paper is divided into two Sections A & B, each carrying 50 marks.
Further each Section has been divided into two Parts.

Section – A (Cost & Management Accounting)
PART – I

1. **Answer the following questions**

(a) Multiple choice questions: **[1x6=6]**

(i) The cost per unit of a product manufactured in a factory amounts to ₹40 (75% variable) when the production is 10,000 units. When production increases by 25%, the cost of production will be ₹_______ per unit.
(a) ₹35
(b) ₹36.25
(c) ₹37.5
(d) ₹38

(ii) Fixed budget is useless for comparison when the level of activity _____________.
(a) Increases
(b) Decreases
(c) Fluctuates both ways
(d) Constant

(iii) The use of management accounting is
(a) Mandatory as per the law
(b) Compulsory
(c) Optional
(d) None of the above

(iv) The time taken for initial unit of a product is 1000 hours. At 80% learning rate what is the total time for 4 units?
(a) 800 hours
(b) 1000 hours
(c) 1600 hours
(d) 2560 hours

(v) Sara Ltd. has extracted the following details from the standard cost card of one of its products:
Direct Labour 4.5 hours @ ₹6.40 per hour
During March 2022, Sara Ltd. produced 2,300 units of the product and incurred direct wages costs of ₹64,150. The actual hours worked were 11,700.
The direct labour rate and efficiency variances were:

	Rate (₹)	Efficiency (₹)
(a)	₹10,730 (F)	₹8,640 (A)
(b)	₹10,730 (F)	₹7,402 (A)
(c)	₹2,090 (F)	₹7,402 (A)
(d)	₹2,090 (F)	₹8,640 (A)

(vi) Which of the following statements are true in case of Market price based transfer price?

(a) It is an extensive arbitration system in fixing the transfer prices between the divisions.

(b) Profits resulting from market price based transfer prices are good parameters for performance evaluation of buying divisions only.

(c) Actual costs are fluctuating and hence difficult to ascertain. On the other hand, market prices can be easily ascertained.

(d) None of the above

(b) Match the following: [1x4=4]

	Column 'A'		Column 'B'
1.	Profitability	A	Detailed short-term cash budget
2.	Goal Congruence	B	Develops cost consciousness among the members of the industry
3.	The Receipt & Payment Method	C	$\frac{\text{Contribution}}{\text{Key Factor}}$
4.	Inter Firm Comparison	D	The objectives of divisional managers match with those of the organisation

(c) State whether the following statements are True or False: [1x4=4]

(i) Fixed Overhead Volume Variance arises due to rise in general price level.

(ii) The master budget is prepared first and all other budgets are sub ordinate to it.

(iii) The breakeven point will be lower if the selling price is increased but the amount of cost does not change.

(iv) Management Accounting is largely based on estimates. It does not deal with actual, alone, and thus total accuracy is not ensured under Management Accounting.

PART – II

Answer any three Question from Q. No. 2, 3, 4, 5. Each question carries 12 marks.

2. (a) Partha Chemicals Ltd. has two factories with similar plant and machinery for manufacture of Soda Ash. The Board of Directors of the company has expressed the desire to merge them and to run them as one integrated unit. The additional fixed cost involved in the merger is estimated at ₹10 lakhs. Following data are available in respect of these two factories:

Factory	A	B
Capacity in operation	60%	100%
Turnover (₹)	120 lakhs	300 lakhs
Variable Cost (₹)	90 lakhs	220 lakhs
Fixed Cost (₹)	25 lakhs	30 lakhs

Find out:

(i) What should be the capacity of the merged factory to be operated for break-even?

(ii) What is the profitability of working 80% of the integrated capacity?

(iii) What turnover will give an overall profit of ₹60 lakhs? **[2+2+2=6]**

2. (b) From the following particulars, find the most profitable product mix and prepare a statement of profitability of that mix: -

Particulars	**Product X**	**Product Y**	**Product Z**
Units budgeted to be produced and sold	1,800	3,000	1,200
Selling price per unit (₹)	60	55	50
Requirement per unit:			
Direct Materials	5 kg	3 kg	4 kg
Direct Labour	4 hrs	3 hrs	2 hrs
Variable Overheads	₹7	₹13	₹8
Fixed Overheads	₹20	₹20	₹20
Cost of Direct Materials per kg.	₹4	₹4	₹4
Direct Labour Hour Rate	₹2	₹2	₹2
Maximum Possible Units of Sales	4,000	5,000	1,500

All the three products are produced from the same direct material using the same type of machines and labour. Direct labour, which is the key factor, is limited to 18,600 hours. **[6]**

3. (a) The budgeted output of a manufacturing company for 2022-23 was 5,000 units. The financial results in respect of actual output of 4,800 units achieved during the year were as under:

Direct Material	₹29,700	Fixed Overheads	₹39,000
Direct Wages	₹44,700	Profit	₹36,600
Variable Overheads	₹72,750	Sales	₹2,22,750

The standard direct wages rate is ₹4.50 per hour and the standard variable overhead rate is ₹7.50 per hour.

The cost accounts recorded the following variances for the year:

Variances	**Favourable (₹)**	**Adverse (₹)**
Material Price	-	300
Material Usage	-	600
Wage rate	750	-
Labour efficiency	-	2,250
Variable overhead expense	3,000	-
Variable overhead efficiency	-	3,750
Fixed overhead expense	-	1,500
Selling price	6,750	-

You are required to:

(i) Prepare a statement showing the original budget and the standard product cost sheet per unit.

(ii) Prepare a statement showing the reconciliation of originally budgeted profit and actual profit. **[3+3=6]**

3. (b) The following information is available from the cost records of a Company for February, 2022:

Materials purchased: 20,000 pieces	₹88,000
Materials consumed: 19,000 pieces	
Actual wages paid for 4,950 hours	₹24,750
Factory Overhead Incurred	₹44,000
Factory Overhead Budgeted	₹40,000
Units Produced 1,800	

Standard Rates and prices are:
Direct Material Rates ₹4 per piece.
Standard Input 10 pieces per unit.
Direct Labour Rate ₹4 per hour.
Standard requirement 2.5 hours per unit.
Overhead ₹8 per labour hour.

Required:
(A) Show the Standard Cost Card.
(B) Compute all material, labour and overhead variances for February 2022. **[6]**

4. (a) The following data are available in a manufacturing company for a yearly period:

Fixed Expenses:	**₹ lakhs**
Wages and salaries	6.5
Rent, rates and taxes	4.6
Depreciation	5.4
Sundry administration expenses	3.5
Semi-variable expenses (At 50% of activity):	
Maintenance and repairs	3.5
Indirect labour	7.9
Sales department salaries, etc.	3.8
Sundry administration expenses	2.8
Variable expenses (At 50% of activity):	
Material	21.7
Labour	20.4
Other expenses	7.9
Total Cost	88.0

Assume that the fixed expenses remain constant for all levels of production; semi-variable expense remain constant between 45 per cent and 65 per cent of capacity; increase by 10 per cent between 65 per and cent 80 per cent capacity and by 20 per cent between 80 per cent and 100 per cent capacity.

Sales at various levels are:	(₹ in lakhs)		(₹ in lakhs)
50% capacity	100	90% capacity	180
60% capacity	120	100% capacity	200
75% capacity	150		

Prepare a flexible budget for the year and forecast the profit at 60 per cent, 75 per cent, 90 per cent and 100 per cent of capacity. **[7]**

4. (b) Himalaya Ltd. has produced its first 10 units of product D. The customer is enquiring about the cost of a further 30 units of product D. The total cost of the original 10 units was:

	₹
Materials	2,000
Variable labour costs (500 hours at ₹10 per hour)	5,000
Variable overheads	1,000
Other overheads	1,000
Machine tool costs	2,000
Total Cost	11,000

Additional Information:

1. Variable overheads are directly affected by variable labour costs.
2. Other overheads are estimated at 20% of variable labour costs.
3. For Machine tool costs, all machine tools can still be used although all costs recovered on first order.

Use an 80% learning curve to estimate the total costs for a new batch of 30 units of Product D. **[5]**

5. Write short notes on any three of the following: [4x3=12]

(a) Distinguish between Cost Accounting and Management Accounting.
(b) Enumerate the distinctive features of Learning Curve Theory.
(c) Enumerate the limitations of Inter-Firm Comparison. Mention the steps to overcome these limitations.
(d) Differentiate between Fixed Budget and Flexible Budget.

Section – B (Financial Management)

PART – I

6. Answer the following questions

(a) Multiple choice questions: [1x6=6]

(i) The discount rate which forces net present values to become zero is classified as
(a) positive rate of return
(b) negative rate of return
(c) external rate of return
(d) internal rate of return

(ii) The term Float is used in
(a) Receivable Management
(b) Cash Management
(c) Marketable Management
(d) Inventory Management

(iii) SPO refers to ________, the second and subsequent time a company raises money from the public directly.
(a) Second Public Offering
(b) Subsequent Public Offering
(c) Subsequent Public Offer
(d) Seasonal Public Offering

(iv) If EBIT = ₹1,00,000, Fixed Assets = ₹2,00,000, Sales = ₹10,00,000 and Variable Cost = ₹7,00,000. Then, the Operating Leverage will be
(a) 2
(b) 6
(c) 3
(d) 4

(v) Net Income Approach to capital structure decision was proposed by
(a) J. E. Walter
(b) M.H. Miller and D. Orr
(c) E. Solomon
(d) D. Durand

(vi) Find the present value of ₹1,000 receivable 6 years hence if the rate of discount is 10 percent.
(a) 564.5
(b) 554.5
(c) 574.5
(d) 600

(b) Match the following: **[1x4=4]**

	Colum		**Column II**
1	Defensive Interval Ratio	A	Modigliani and Miller Hypothesis
2	Theory of Capital structure	B	Liquidity of a firm in relation to its ability to meet daily operating expenditure.
3	Stochastic Model	C	Value of share is worth the present value of its future dividend rather than its earnings.
4	Myron Gordon	D	Control Limits

(c) State whether the following statements are True or False: **[1x4=4]**

(i) Low degree of operating leverage and high degree of financial leverage is not an ideal situation.
(ii) When NPV is zero PI will be one.
(iii) Net Present Value method cannot serve as the best decision criteria for selection of projects when they are mutually exclusive.
(iv) IRR is also known as the highest opportunity cost that the project can bear.

PART – II

Answer any three Question from Q. No. 7, 8, 9, 10. Each question carries 12 marks.

7. (a) A company has a profit margin of 20% and asset turnover of 3 times. What is the company's return on investment? How will this return on investment vary if :

(i) Profit margin is increased by 5%?

(ii) Profit margin is decreased by 5% and asset turnover is increase to 4 times?

If value of fixed assets as on 31-3-2022 amounted to ₹26 lakhs, prepare a balance sheet of the company for the year ended 31-3-2023. **[4]**

7. (b) VW LTD. gives you the following information for the year ended 31st March, 2023:

(i) Sales for the year totalled ₹96,00,000. The company sells goods for cash only.

(ii) Cost of goods sold was 60% of sales. Closing inventory was higher than opening inventory by ₹20,000.

(iii) Tax paid amounted to ₹7,00,000. Other expenses totalled ₹21,45,000. Outstanding expenses on 31st March, 2022 and 31st March, 2023, totalled ₹82,000 and ₹91,000 respectively.

(iv) New machinery and furniture costing ₹10,50,000 in all were purchased. One equipment was sold for ₹20,000.

(v) A right issue was made of 50,000 shares of ₹10 each at a premium of ₹3 per share. The entire money was received with application.

(vi) Dividends totalling ₹4,00,000 were distributed among the shareholders.

(vii) Cash in hand and at Bank as at 31st March, 2022 and 31st March, 2023 totalled ₹2,10,000 and ₹4,14,000 respectively.

You are required to prepare cash flow statement as per CAS–3 for the year ended 31st March, 2023 using the Direct method. **[8]**

8. (a) The management of APC LTD. has called for a statement showing the working capital needed to finance a level of activity of 3,00,000 units of output for the year ended March 31, 2023. The cost structure for the company's product, for the above mentioned activity level, is detailed below:

Particulars	Cost per unit (₹)
Raw material	20
Direct Labour	5
Overheads	15
Total Cost	40
Profit	10
Selling price	50

Past trends indicate that the raw materials are held in stock, on an average, for two months. Work-in-process (50 per cent complete) will approximate to ½ month's production. Finished goods remain in warehouse, on an average, for 1 month. Suppliers of materials extend 1 month's credit. Two months' credit is normally allowed to debtors. A minimum cash balance of ₹25,000 is expected to be maintained. The production pattern is assumed to be even during the year (12 months).

Required: Prepare a Statement of Working Capital determination. **[7]**

8. (b) The following information is available for AVANTI CORPORATION:

Earnings per share	₹ 6
Rate of Return on Investment	20%
Rate of return required by shareholders	16%

Required:

What should be the approximate dividend pay-out ratio so as to keep the share price at ₹44 by using Walter Model? **[5]**

9.(a) The Drew Furniture Company is considering the introduction of a new product line. Plant and inventory expansion equal to 50% of present asset levels will be necessary to handle the anticipated volume of the new product line. New capital will have to be obtained to finance the asset expansion. The following two proposals have been developed to provide the additional capital:

1. Raise ₹1,00,000 by issuing 10 years 12% bonds. This will change the capital structure from one with about 20% debt to one with almost 50% debt. The investment banking house estimates the price/earnings ratio, now 12 to 1, will be reduced to 10 to 1 if this method of financing is chosen.
2. Raise ₹1,00,000 by issuing new common stock. The investment banker believes that the stock can be issued to yield ₹33.33. The P/E ratio would remain at 12 to 1, if the stock were issued. The present market price is ₹36.

The company's most recent financial statements are as follows:

Balance sheet as on December 31, 2022

Liabilities	Amount (₹)	Assets	Amount (₹)
Common Stock	1,00,000	Plant and Equipment	1,35,000
5% Debt	40,000	Current Assets	65,000
Retained Earnings	60,000		
	2,00,000		**2,00,000**

Income Statement for the year ended December 31, 2022 Amount (₹)

Sales	6,00,000
Less: Operating Costs	(5,38,000)
Operating Income	62,000
Less: Interest Charge	(2,000)
Net Income Before Taxes	60,000
Less: Income Taxes	(30,000)
Net Income	30,000

(i) The Vice President of Finance asks you to calculate the earnings per share and the market value of the stock (assuming the price/earnings ratio given are valid estimates) for the two proposals assuming total sales (including the new product line) of: (1) ₹4,00,000; (2) ₹6,00,000; and (3) ₹8,00,000. Costs exclusive of interest and taxes are about 90% of sales.

(ii) Which proposal would you recommend? Your answer should indicate the criteria used to judge the alternatives. **[8]**

9. (b) Projects X and Y are analyzed and you have determined the following parameters. Advice the investor on the choice of a project:

Particulars	**Project X**	**Project Y**
Investment	₹ 7 cr.	₹ 5 cr.
Project Life	8 years	10 years
Construction Period	3 years	3 years
Cost of Capital	15%	18%
N.P.V. @ 12%	₹ 3,700	₹ 4,565
N.P.V. @ 18%	₹ 325	₹ 325
I.R.R.	45 %	32%
Rate of Return	18 %	25 %
Payback	4 years	6years
B.E.P.	45%	30%
Profitability Index	1.76	1.35

[4]

10. Write short notes on any three of the following: **[4×3=12]**

(a) Factoring vs. Forfeiting (any four)

(b) Foreign Currency Convertible Bonds (FCCBs)

(c) Objective of Receivables Management

(d) Limitations of Funds Flow Statement