Paper 10 - COST & MANAGEMENT ACCOUNTING AND FINANCIAL MANAGEMENT

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

Part A - (Cost and Management Accounting)

Section – I

1. Answer the following questions:

(a) Choose the correct answer from the given four alternatives: [1×6 = 6]

(i) Profit volume ratio establishes the relationship between…
a. Contribution and profit
b. Fixed cost and contribution
c. Profit and sales
d. Contribution and sales value

(ii) A desire to achieve a particular goal with pursuit of that goal is called:
a. motivation
b. goal congruence
c. effort
d. autonomy

(iii) The scare factors are also known as
a. Key factor
b. Abnormal factor
c. Linking factor
d. None of the above

(iv) A budgeting process which demands each manager to justify his entire budget in detail from beginning is:
a. Functional budget
b. Master budget
c. Zero base budgeting
d. None of the above

(v) The sub-variance of material usage variance, known as Material mix variance is measured as
a. Total standard cost - Total actual cost
b. Standard cost of revised standard mix - Standard cost of actual mix
c. (Standard unit price - Actual unit price) * Actual quantity used
d. (Standard quantity - Actual quantity) * Unit standard price

(vi) Another name for the learning curve is a(n)
a. experience curve
b. exponential curve
c. growth curve
d. production curve

(b) Match the statement in Column I with the most appropriate statement in Column II: [1×4 = 4]

Column I	Column II
(i) Differential Cost	(A) Division of total cost into Fixed and Variable
(ii) Opportunity Cost	(B) Future cost
(iii) Marginal Cost	(C) Cost Cannot be controlled
(iv) Sunk Cost	(D) Cost can be controlled

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

(i) Standard costs are used for external reporting.

(ii) A high P/V ratio for a business indicates that a slight decrease in sales volume results in higher profits.

(iii) Zero based budgeting involves identification of decision units.

(iv) Learning curve is a cost reduction technique.

Section - II

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

2. (a) The following data relates to a manufacturing company:

Plant Capacity = 4,00,000 units per annum. Present Utilization = 40%

Actual for the year 2014 were:

Selling price = ` 50 per unit, Material cost = ` 20 per unit,

Variable Manufacturing costs = ` 15 per unit and Fixed cost = ` 27,00,000.

In order to improve capacity utilization, the following proposal is considered:

Reduce Selling price by 10% and spend additionally `3,00,000 in Sales Promotion.

How many units should be produced and sold in order to increase profit by `8,00,000 per year?

(b) The following information is available for the first and second quarter of the year for Pankaj limited:

Quarter	Production (in units)	Semi- variable Cost
Quarter I	36,000	₹ 2,80,000
Quarter II	42,000	₹ 3,10,000

You are required to calculate the semi variable Cost and calculate Total Fixed Cost and Variable cost per unit. **[8+4=12]**

3. **(a)** The following information are provided to you for a month in respect of a workshop:

(i) Overhead cost variance – ₹1,400 adverse
(ii) Overhead volume variance – 1,000 adverse
(iii) Budgeted hours - 1,200 hrs.
(iv) Budgeted overhead – ₹6,000
(v) Actual rate of recovery of overheads - ₹8 per hour

You are required to compute:

(1) Overhead expenditure variance
(2) Actual overheads incurred
(3) Actual hours for actual production

(b) Gemini chemicals Ltd. Provides the following information from its records:

Material	Quantity (kgs)	Rate/kg (`)
A	8	6
B	4	4
	12	

During April 2017, 1,000 kgs of GEMCO were produced. The actual consumption of material was as under:

Material	Quantity (kgs)	Rate/kg (`)
A	760	7
B	500	5
	1,260	

Calculate: i. Material cost variance
ii. Material Price variance **[6+6=12]**

4. **(a)** From the following data, prepare a Production Budget for ABC Co. Ltd., for the six months' period ending on 30th June, 2023. Stocks for the budgeted period:

(in units)

Product	As on 01 January, 2017	As on 30 June, 2017
A	6,000	10,000
B	9,000	8,000
C	12,000	17,500

Other relevant data:

Product	Normal loss in production	Requirement to fulfill sales programme (units)

A	4%	60,000
B	2%	50,000
C	5%	80,000

(b) XYZ Ltd., which has a system of assessment of Divisional Performance on the basis of residual income, has two Divisions, Alfa and Beta. Alfa has annual capacity to manufacture 15,00,000 units of a special component that it sells to outside customers but has idle capacity. The budgeted residual income of Beta is ` 1,20,00,000 and that of Alfa is ` 1,00,00,000.

Other relevant details extracted from the budget for the current year are as follows:

Particulars of Alfa:

Sale (Outside customers)	12,00,000 units @ ` 180 per unit
Variable cost per unit	` 160
Divisional fixed cost	` 80,00,000
Capital employed	` 7,50,00,000
Cost of Capital	12%

Beta has received a special order for which it requires components similar to the ones made by Alfa. Fully aware of the idle capacity of Alfa, Beta has asked Alfa to quote for manufacture and supply of 3,00,000 units of the components with a slight modification during final processing. Alfa and Beta agreed that this will involve an extra variable cost to Alfa amounting to ` 5 per unit.

Calculate the transfer price, which Alfa should quote to Beta to achieve its budgeted residual income. **[6+6=12]**

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

(a) Key Factor

(b) Steps involved in Zero Based Budgeting

(c) State the general principles of Standard Costing.

(d) Profit Variance

Part B - (Financial Management)

Section - III

6. Answer the following questions:

(a) Choose the correct answer from the given four alternatives: [1x6=6]

(i) In a Balance Sheet, equity and fixed assets are expressed in terms of them

a. Market Value
b. Cost
c. Book Value
d. Replacement Value

(ii) The measure of leverage is:

a. PAT/Equity
b. Equity/Debt
c. Total Assets/Equity
d. Total Debt/Equity

(iii) If the RBI intends to reduce the supply of money as part of an anti-inflation policy, it might

a. Lower Bank rate
b. Increase Cash Reserve Ratio
c. Buy Govt. securities in open market
d. Decrease Statutory Liquidy Ratio

(iv) Purchase of Machinery by issue of shares should be_________ from Cash Flow statement.

a. included
b. excluded
c. included with value 0
d. None of the above.

(v) In mutually exclusive projects, project which is selected for comparison with others must have

a. higher net present value
b. lower net present value

c. zero net present value
d. none of above

(vi) The *dividend-payout ratio* is equal to
a. the dividend yield plus the capital gains yield.
b. dividends per share divided by earnings per share.
c. dividends per share divided by par value per share.
d. dividends per share divided by current price per share.

(b) Match the statement in Column I with appropriate statement in Column II **[1x4=4]**

Column I	Column II
(i) Common size analysis	(A) Earnings Yield
(ii) Earnings/Stock Price	(B) A technique uses in comparative analysis of financial statement
(iii) DOL	(C) Explains irrelevance of Dividend Policy
(iv) MM Model	(D) Contribution/EBIT

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

(i) A goal or objective is a necessary first step for effective financial management.
(ii) An aggressive working capital policy would have low liquidity, higher risk, and higher profitability potential.
(iii) If a company has no fixed costs, its DOL equals 1.
(iv) According to the NOI approach to valuation, the total value of the firm is affected by changes in its capital structure.

Section - IV

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

7. (a) From the following Balance Sheet and additional information, you are required to calculate:
(i) Return on Total Resources
(ii) Return on Capital Employed
(iii) Return on Shareholders' Fund

Particulars	`	Particulars	`
Share Capital(`10)	8,00,000	Fixed Assets	10,00,000
Reserves	2,00,000	Current Assets	3,60,000
8% Debentures	2,00,000		

Creditors	1,60,000		
	1,360,000		13,60,000

Net operating profit before tax is `2,80,000. Assume tax rate at 50%. Dividend declared amounts to `1,20,000/-

(b) ABC Ltd. Company's Comparative Balance Sheet for 2023 and the Company's Income Statement for the year are as follows:

ABC Ltd.

Comparative Balance Sheet March 31, 2023 and 2022

(₹ in crores)

Particulars	2023			2022		
Sources of funds:						
Shareholder's funds						
Share Capital		140			140	
Retained earnings		110	250		92	232
Loan funds						
Bonus payable			135			40
Total			**385**			**272**
Application of funds						
Fixed Assets						
Plant and Equipment		430			309	
Less: Accumulated depreciation		(218)	212		(194)	115
Investments			60			75
Current Assets						
Inventory	205			160		
Accounts receivable	180			270		
Pre-paid expenses	17			20		
Cash	26	428		10	460	
Less : Current liabilities and provisions						
Accounts payable	230			310		
Accrued liabilities	70			60		
Deferred income-tax provision	15	315	113	8	378	82
Total			**385**			**272**

ABC Ltd.

Income Statement for the year ended March 31, 2023

(₹ in crores)

Sales	1,000
Less : Cost of goods sold	530

Gross margin	470
Less : Operating expenses	352
Net operating income	118
Non-operating items:	
Loss on sale of equipment	(4)
Income before taxes	114
Less : Income-taxes	48
Net Income	**66**

Additional information:

(i) Dividends of `48 crores were paid in 2023.

(ii) The loss on sale of equipment of `4 crore reflects a transaction in which equipment with an original cost of `12 crore and accumulated depreciation of `5 crore were sold for `3 crore in cash.

Required:

Using the indirect method, determine the net cash provided by operating activities for 2023 and construct a statement of cash flows. **[4+8=12]**

8. (a) A proforma cost sheet of a Company provides the following data:

Particulars	`
Raw material cost per unit	117
Direct Labour cost per unit	49
Factory overheads cost per units (includes depreciation of `18 per unit at budgeted level of activity)	98
Total cost per unit	264
Profit	36
Selling price per unit	300

Following additional information is available:

Average raw material in stock	:	4 weeks
Average work-in-process stock	:	2 weeks
(% completion with respect to		
Materials	:	80% ;
Labour and Overheads	:	60%)
Finished goods in stock	:	3 weeks
Credit period allowed to debtors	:	6 weeks
Credit period availed from suppliers	:	8 weeks
Time lag in payment of wages	:	1 week
Time lag in payment of overheads	:	2 weeks

The company sells one-fifth of the output against cash and maintains cash balance of ` 2,50,000.

Required:

Prepare a statement showing estimate of working capital needed to finance a budgeted activity level of 87,000 units of production. You may assume that production is carried on evenly throughout the year and wages and overheads accrue similarly.

(b) Find **out Financial Leverage** from the following data:

Net Worth	`50,00,000
Debt/Equity	3:1
Interest Rate	12%
Operating Profit	`40,00,000

[9+3=12]

9. (a) Aries Limited wishes to raise additional finance of `10 lacs for meeting its investment plans. It has ₹2,10,000 in the form of retained earnings available for investment purposes.

The following are the further details:

(i) Debt/equity mix 30% / 70%

(ii) Cost of debt upto `1,80,000 10% (before tax) beyond ` 1,80,000 16% (before tax)

(iii) Earnings per share ` 4

(iv) Dividend payout 50% of earnings

(v) Expected growth rate in dividend 10%

(vi) Current market price per share ` 44

(vii) Tax rate 50%

You are required to:

a. determine the pattern for raising the additional finance.

b. determine the post-tax average cost of additional debt.

c. determine the cost of retained earnings and cost of equity, and

Compute the overall weighted average after tax cost of additional finance.

(b) Annu Ltd. is examining two mutually exclusive investment proposals. The management uses Net Present Value Method to evaluate new investment proposals. Depreciation is charged using Straight-line Method. Other details relating to these proposals are:

Particulars	Proposal X	Proposal Y
Annual Profit before tax (`)	13,00,000	24,50,000

Cost of the Project (`)	90,00,000	180,00,000
Salvage Value (`)	1,20,000	1,50,000
Working Life	4 years	5 Years
Cost of capital	10%	10%
Corporate Tax Rate	30%	30%

The present value of `1 at 10% discount rates at the end of first, second, third, fourth and fifth year are 0.9091; 0.8264; 0.7513; and 0.6209 respectively.

You are required to advise the company on which proposal should be taken up by it. **[6+6=12]**

10. Write short note on any three of the following: **[3x4=12]**

(a) Issue of Commercial Papers in India

(b) Danger of too high amount of Working Capital

(c) CAPM

(d) NPV