INTERMEDIATE EXAMINATION
GROUP - III
(SYLLABUS 2016)

SUGGESTED ANSWERS TO QUESTIONS
JUNE - 2017

Paper-10 : COST & MANAGEMENT ACCOUNTING AND FINANCIAL MANAGEMENT

Time Allowed : 3 Hours   Full Marks : 100

The figures in the margin on the right side indicate full marks.
All working must form part of your answer. Assumptions, if any must be clearly indicated.
Please (i) Write answers to all parts of a question together.
(ii) Open a new page for answer to a new question.
(iii) Attempt the required number of questions only.

Part – A
(Cost and Management Accounting)

Section - I
Answer the following questions

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

   (i) Type of accounting which measures, reports and analyse non-financial and financial information to help in decision making is called:
      (A)   Financial Accounting
      (B)   Management Accounting
      (C)   Cost Accounting
      (D)   Green Accounting

   (ii) Which one of the following is not considered as a method of Transfer Pricing?
      (A)   Negotiated Transfer Pricing
      (B)   Market Price Based Transfer Pricing
      (C)   Fixed Cost Based Transfer Pricing
      (D)   Opportunity Cost Based Transfer Pricing

   (iii) In cost accounting, purpose of variance analysis is to:
      (A)   understand reasons for variances.
      (B)   take remedial measures.
      (C)   improve future performance.
      (D)   All of the above

   (iv) Absorption Costing is also known as:
      (A)   Total Costing
      (B)   Committed Costing
      (C)   Target Costing
      (D)   Discretionary Costing

   (v) Which of the following is not correct with regard to Margin of Safety (MOS)?
      (A) $MOS = \dfrac{Profit}{PV\ Ratio}$
      (B)   MOS = Total Sales – Sales at BEP
      (C) $MOS = \dfrac{Total\ Sales - Sales\ at\ BEP}{Total\ Sales} \times 100$
      (D)   MOS = PV Ratio × Sales – Fixed Cost

(vi) Which one of the following is not to be considered for preparing a production budget?
- (A) The production plan of the organization
- (B) The Sales Budget
- (C) Research and Development Budget
- (D) Availability of Raw Materials

(b) Match Column A with Column B: 1×4=4

Column 'A'		Column 'B'
1. Learning Curve	(A)	Negotiated Pricing
2. Zero Base Budgeting	(B)	Human Phenomenon
3. Transfer Price	(C)	Fixed Costs are charged to Cost of Production
4. Absorption Costing	(D)	Discretionary Cost

(c) State whether the following statements are True or False: 1×4=4
- (i) Standard Costs are arrived on the basis of costs incurred in the past.
- (ii) Experience Curve effects are reinforced when two or more products share a common resource.
- (iii) Preparation of a Master Budget precedes preparation of Functional Budgets.
- (iv) Other variables remaining constant, a hike in selling price per unit will lower the Break Even Point.

Answer:

1. (a) (i)   (B)
     (ii)   (C)
     (iii)   (D)
     (iv)   (A)
     (v)   (D)
     (vi)   (C)

   (b) (1)   (B)
     (2)   (D)
     (3)   (A)
     (4)   (C)

   (c) (i)   False
     (ii)   False
     (iii)   False
     (iv)   True

Section - II

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

2. (a) The anticipated sales of Electronic Corporation Ltd. is ₹ 4,00,000 and unit selling price is ₹ 20 each. The per unit cost of direct material is ₹ 9, labour is ₹ 3 and other variable expenses are ₹ 3 per unit. The company is earning a net profit of 5% and to improve the profitability, the following proposals were discussed at the Executive Committee Meeting:
- (i) The present administrative setup is on the regional basis and it was felt that centralization will reduce the fixed cost by ₹ 12,000.
- (ii) The Production Manager has agreed that he will try to work on a cost reduction programme which will reduce the cost by ₹ 1 per unit but there will be little impact on the quality which will be negligible to the customer.
- (iii) The Sales Manager opposed the two proposals and suggests that it may be possible to increase the number of units sold by 20%, provided the selling price is reduced by 5%.

(iv) Alternatively, as per Sales Manager, if the selling price is increased by 10%, the sales number of units will be reduced by 5%.

As the Cost and Management Accountant of the company, evaluate the aforesaid four proposals and also put forward your suggestions to improve the situation.

(b) Calculate Margin of Safety from the following information:

Sales ₹ 30,00,000;   Fixed expenses ₹ 9,00,000;   Profit ₹ 6,00,000   8+4=12

Answer:

2. (a)

Particulars	Per Unit (₹)	Total (₹)
Sales (20,000 units)	20	4,00,000
Variable Costs		
-Direct Materials	9	1,80,000
-Labour	3	60,000
-Other variable Expenses	3	60,000
Total variable cost	15	3,00,000
Contribution	5	1,00,000
Less: Profit @ 5% of 4,00,000		20,000
Total Fixed Cost		80,000

Proposal	(i) Central administration (Reduction in F.C. by ₹12,000)	(ii) Variable cost Reduction by ₹ 1 per unit	(iii) 20% increase in Sales units with 5% reduction in selling price	(iv) 10% increase in Selling price and 5% reduction in sales units
Sales(units)	20,000	20,000	24,000	19,000
Selling price per unit (₹)	20	20	19	22
Variable cost (₹)	15	14	15	15
Contribution / unit	5	6	4	7
Total Contribution (₹)	1,00,000	1,20,000	96,000	1,33,000
Less: Fixed cost (₹)	68.000	80,000	80,000	80,000
Net Profit (₹)	32.000	40,000	16,000	53,000
Anticipated Profit (₹)	20.000	20,000	20,000	20,000
Increase (Decrease) in profit (₹)	(+) 12,000	(+)20,000	(-)4,000	(+)33,000

Conclusion: The proposal of Sales Manager (i.e., iii) is not at all acceptable as this will result in loss of ₹ 4,000. The proposal (ii), with a profit of ₹ 20,000, will have little impact on quality. This proposal is fraught with marketing dangers. The lower quality of the product will have long-range disadvantages, as compared to the product of the competitors. The Sales Manager's proposal – (iv) is really attractive, as it will fetch additional profit worth ₹ 33,000. The proposal – (i) will yield additional profit of ₹ 12,000. As Cost and Management Accountant of the company, I will recommend combination of proposals (i) and (iv).

(b) P/V Ratio = (Fixed expenses + Profit / Sales) × 100

            = ₹ [(9,00,000 + 6,00,000) / 30,00,000] × 100

            = (15,00,000 / 30,00,000) × 100   = 50%

Margin of Safety = Profit ÷ P/V Ratio   = 6,00,000 ÷ 50%   = 12, 00, 000

3. (a) In MJ Limited the standard set for material consumption was 100 kg. @ ₹ 2.25 per kg. In a cost period:
Opening stock was 100 kg. @ ₹ 2.25 per kg.
Purchases made 500 kg. @ ₹ 2.15 per kg.
Consumption 110 kg.
As a Cost and Management Accountant you have to calculate:
(i) Material Usage Variance, and
(ii) Material Price Variance in the following three situations:
(A) When variance is calculated at point of purchase.
(B) When variance is calculated at point of issue on FIFO basis.
(C) When variance is calculated at point of issue on LIFO basis.

(b) From the following information compute the Fixed Overhead Variance, Expenditure Variance and Volume Variance:

	Budget Expenses (₹)	Actual Expenses (₹)
Fixed Overheads	40,000	40,800
Units of Production	20,000	20,800
Time for each unit of production	2 hours	
Actual Hours worked		40,200

6+6=12

Answer:

3. (a) (i) MJ Limited
Computation of Material Usage Variance
Material Usage Variance = SQSP - AQSP
= SP(SQ - AQ)
= 2.25(100 - 110)
= 22.50 (A)

(ii) (1) When Variance is calculated at the point of purchase:
Price variance = AQSP - AQAP
= (110 × 2.25)-(110 × 2.15)
= 11(F)
(2) When variance is calculated at the point of Issue on FIFO basis
Price variance = AQSP - AQAP
= (110 × 2.25)-([100 × 2.25]+[10 × 2.15])
= 1 (F)
(3) When variance is calculated at the point of issue on LIFO basis
Price variance = AQSP - AQAP
= (110 × 2.25)-(110 × 2.15)
= 247.50 - 236.50
= 11(F)

(b) Fixed Overhead Cost Variance = 41600 – 40800 = 800 (F)
Expenditure Variance = 40000 – 40800 – 800 (A)
Volume Variance = 41600 – 40000 = 1600 (F)

4. (a) A company is at present working at 90% of its capacity and producing 13,500 units per annum. It operates a flexible budgetary control system. The following figures are obtained from its budget:

	90%	100%
	(₹)	(₹)
Sales	15,00,000	16,00,000
Fixed expenses	3,00,500	3,00,600
Semi-fixed expenses	97,500	1,00,500
Variable expenses	1,45,000	1,49,500

Units made		13,500	15,000

Labour and material costs per unit are constant under present conditions. Profit margin is 10%.

(i) You are required to determine the differential cost of producing 1,500 units by increasing capacity to 100%?

(ii) What would you recommend for an export price for these 1,500 units if overseas prices are much lower than indigenous prices?

(b) A company has two divisions, manufacturing and assembly. At a normal volume of 250,000 units of component YPY per year, production costs per unit are:

Direct materials	40
Direct labour	20
Variable factory overhead	12
Fixed factory overhead	42
Total	₹ 114

The manufacturing division has been manufacturing and selling 2,50,000 components per year to outside buyers for ₹ 136 each. However, the division can manufacture 350,000 components per year. The assembly division has been buying the components from outside suppliers for ₹ 130 each. The assembly division has offered to purchase 90,000 units of component YPY from the manufacturing division at the rate of ₹ 104 per unit. Should the manager of Electrical Division accept the offer? Will an internal transfer be of any benefit to the company?   6+6=12

Answer:

4. (a)

Computation of material and labour cost

Particulars	₹	₹
Sales at present		15,00,000
(-)Profit @ 10%		1,50,000
Total cost		13,50,000
(-) All costs other than material & labour		
Fixed expenses	3,00,500	
Semi-fixed expenses	97,500	
Variable expenses	1,45,000	5,43,000
Material & Labour cost		8,07,000

(i) Statement showing differential cost of 1500 units:

Particulars	₹
Material & Labour (8,07,000 × 1500/13,500)	89,667
Fixed expenses (3,00,600-3,00,500)	100
Semi-fixed expenses (1,00,500-97,500)	3,000
Variable expenses (1,49,500-1,45,000)	4,500
Differential cost	97,267

Differential cost per unit = 97,267/1,500 = ₹ 64.84.

(iii) The minimum price for these 1,500 units should not be less than ₹ 64.84.

(b) Manufacturing Division manager should accept. As there is surplus capacity, the relevant costs to the division is the VC, i.e., ₹ 72 per component

The increased Contribution Margin to the Manufacturing Division would be 90,000 × (₹ 104 - 72) = ₹ 2,88,000.

The company would be better off with an internal transfer. Currently paying ₹ 130 for components that could be made internally for incremental cost of ₹ 72, the company would save 90,000 × (130 -72) = ₹ 5,22,000 per year.

5. Write short note on any three of the following: **4×3=12**
   (a) Differential Cost
   (b) Angle of Incidence
   (c) Principal Budget Factor
   (d) Learning Curve

Answer:

5. **(a) Differential Cost** is the change in the costs which results from the adoption of an alternative course of action. The alternative actions may arise due to change in sales volume, price, product mix (by increasing, reducing or stopping the production of certain items), or methods of production, sales, or sales promotion, or they may be due to 'make or buy' take or refuse' decisions. When the change in costs occurs due to change in the activity from one level to another, differential cost is referred to as incremental cost or detrimental cost.

   (b) Angle of incidence: Angle of Incidence is an angle formed at the intersection point of total Sales line and total cost line in a formal break even chart. If the angle is larger, the rate of growth of profit is higher and if the angle is lower, the rate of growth of profit is lower. So, growth of profit or profitability rate is depicted by Angle of Incidence.

   (c) Principal Budget Factor: Budgets cover all the functional areas of the organisation. For the effective implementation of the budgetary system, all the functional areas are to be considered which are interlinked. Because of these interlinks, certain factors have the ability to affect all other budgets. Such factor is known as principle budget factor.

   Principal Budget factor is the factor the extent of influence of which must first be assessed in order to ensure that the functional budgets are reasonably capable of fulfillment. A principal budget factor may be lack of demand, scarcity of raw material, non-availability of skilled labour, inadequate working capital etc. If for example, the organisation has the capacity to produce 2500 units per annum. But the production department is able to produce only 1800 units due to non-availability of raw materials. In this case, non-availability of raw materials is the principal budget factor (limiting factor). If the sales manger estimates that he can sell only 1500 units due to lack of demand. Then lack of demand is the principal budget factor. This concept is also known as key factor, or governing factor. This factor highlights the constraints with in which the organisation functions.

   (d) Learning Curve: It is essentially a measure of the experience gained in production of an article by an organization. As more and more units are reproduced, workers involved in production become more efficient than before. Each subsequent unit takes fewer man hour to produce. The learning curve exists during a worker's start up or familiarization period on a particular job. After the limits of experimental learning are reached, productivity tends to stabilize and no further improvement is possible.

   The learning curve will pass through three different phases. In the first phase, there will be gradual increase in production rate until the maximum expected rate is reached and this phase is generally steep. In the second phase, the learning rate will gradually deteriorate because of the limitations of equipment. In the third phase, the production rate begins to decrease due to a reduction in customer requirements and increase in costs.
   Under the Learning curve model, the cumulative average time per unit produced is assumed to fall by a constant percentage every time total output of the unit doubles.

Learning curve is a geometrical operation, as the identical operation is increasingly repeated.

Learning curve is essentially a measure if the experience gained in production of an article by an organization. As more and more units re-produced, workers involved in production become more efficient than before. Each subsequent unit takes fewer man-hours or produce. The Learning curve exists during a worker's start up or familiarization period on a particular job. After the limits of experimental learning are reached, productivity tends to stabilize and no further improvement is possible. The learning curve ratio can be calculated with the help of the following formula:

$$\text{Learning curve ratio} = \frac{\text{Average Cost of First 2 Units}}{\text{Average Labour Cost of First Units}}$$

Graphical presentation of learning curve

The learning curve (not to be confused with experience curve) is a graphical representation of the phenomenon explained by Theodore P. Wright in his "Factors Affecting the Cost of Airplanes", 1936. It refers to the effect that learning had on labour productivity in the aircraft industry, which translates into a relation between the cumulative number of units produced (X) and the average time (or labour cost) per unit (Y), which resulted in a convex downward slope, as seen in the adjacent diagram.

There is a simple rationalisation behind all this: the more units produced by a given worker, the less time this same worker will need to produce the following units, because he will learn how to do it faster and better. Therefore, when a firm has higher cumulative volume of production, its time (or labour cost) per unit will be lower. Wright's learning curve model is defined by the following function:

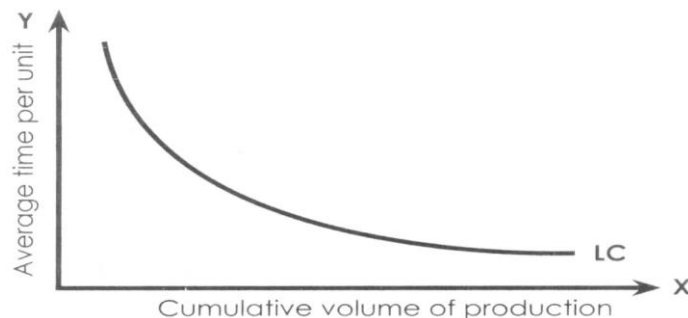$$Y = a \times \frac{\text{Log}_b}{\text{Log}_2}$$

where:

Y = average time (or labour cost) per unit

a = time (or labour cost) per unit

X = cumulative volume of production

b = learning rate (%)

Some important implications arise from this curve. If the time (or labour cost) per unit decreases as the cumulative output increases, this will mean that firms that have been producing more and for a longer period, will have lower average time per unit and thus dominate the market.

Part – A
(Financial Management)

Section - III

6. Answer the following questions:

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

   (i) Which of the following is the main objective of financial management?
     (A) Revenue Maximisation
     (B) Profit Maximisation
     (C) Wealth Maximisation
     (D) Cost Minimisation

   (ii) Which one of the following activities is outside the purview of financing decision in financial management?
     (A) Identification of the source of funds
     (B) Measurement of the cost of funds
     (C) Deciding on the time of raising the funds
     (D) Deciding on the utilization of the funds

   (iii) A firm has a capital of ₹ 10 lakhs, sales of ₹ 5 lakhs, gross profit of ₹ 2 lakhs and expenses of Rs.1 lakh. The Net Profit Ratio is:
     (A) 50%
     (B) 40%
     (C) 20%
     (D) 10%

   (iv) Which of the following forms of equity financing is especially designed for funding High Risk & High Reward projects?
     (A) ADR
     (B) GDR
     (C) FCCB
     (D) Venture Capital

   (v) A process through which loans and other receivables are underwritten and sold in a form of asset is known as:
     (A) Factoring
     (B) Forfeiting
     (C) Securitisation
     (D) Bill Discounting

   (vi) In Net Profit Ratio, the denominator is:
     (A) Credit Sales
     (B) Net Sales
     (C) Cost of Sales
     (D) Cost of Goods Sold

(b) Match Column 'A' with Column 'B'. 1×4=4

	Column 'A'		Column 'B'
1.	Leverage	(A)	Control Limits
2.	Stochastic Model	(B)	Influence of one force over another
3.	Commercial Paper	(C)	Sold at Discount
4.	Factoring	(D)	Raise Short Term Finance through Receivables

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

   (i) In case of mutually exclusive capital budgeting decision, all the feasible proposals may be accepted.

   (ii) As per the Gordan Model, $K_e = D_1/P_0 + g$, where K_e = Cost of Equity, D_1 = Dividend, P_0 = Current market price of share and g = growth rate.

   (iii) Gross Working Capital is the difference between total current assets and total current liabilities.

   (iv) Working Capital Turnover Ratio may be classified under Activity Ratio.

Answer:

6. (a) (i)   (C)
       (ii) (D)
       (iii) (C)
       (iv) (D)
       (v)   (C)
       (vi) (B)

   (b) (1)   (B)
       (2)   (A)
       (3)   (C)/(D)
       (4)   (D)/(C)

   (c) (i)   False
       (ii) True
       (iii) False
       (iv) True

Section - IV

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

7. **(a) From the following information, prepare a summarized Statement of Assets and Liabilities as on 31st March, 2017:**

(i) Working Capital	₹1,20,000	
(ii) Reserves & Surplus	₹ 80,000	
(iii) Bank Overdraft	₹ 20,000	
(iv) Proprietary Ratio		0.75
(v) Current Ratio		2.50
(vi) Liquid Ratio		1.50

Your workings should form a part of your answer.

(b) From the following Summarised Statement of Assets and Liabilities of XYZ Ltd., prepare a Statement of Changes in the Working Capital.

	31st March			31st March	
LIABILITIES	**2015 (₹)**	**2016 (₹)**	**ASSETS**	**2015 (₹)**	**2016 (₹)**
Equity Share Capital	3,00,000	4,00,000	Goodwill	1,15,000	90,000
8% Preference Share Capital	1,50,000	1,00,000	Land & Buildings	2,00,000	1,70,000
Profit & Loss Account	30,000	48,000	Plant & Machinery	80,000	2,00,000
General Reserve	40,000	70,000	Debtors	1,60,000	2,00,000
Proposed Dividend	42,000	50,000	Stock	77,000	1,09,000
Creditors	55,000	83,000	Bills Receivable	20,000	30,000
Bills Payable	20,000	16,000	Cash in hand	15,000	10,000
Provision for Taxation	40,000	50,000	Cash at Bank	10,000	8,000
	6,77,000	8,17,000		6,77,000	8,17,000

Following additional information are available:
   (i)   Depreciation of ₹ 10,000 and ₹ 20,000 have been charged on Plant & Machinery and Land & Buildings respectively in 2016.
   (ii) Interim dividend of ₹ 20,000 has been paid in 2016.
   (iii) Income tax of ₹ 35,000 has been paid in 2016.   **8+4=12**

Answer:

7. (a) Working Notes:

(i) **Current Ratio**= Current Assets (CA)/Current Liabilities(CL) = 2.50 i.e., 2.5 :1.0
Working Capital = ₹ 1,20,000
Current Assets / Current Liabilities = 2.5
CA = 2.5 CL
CA – CL = 1,20,000
2.5 CL – CL = 1,20,000
1.5 CL = 1,20,000
CL = 1,20,000
                1.5
       = ₹ 80,000
CA = 2.5 CL
       = 2.5 × 80,000
       = ₹ 2,00,000

Note:
Bank Overdraft   = ₹ 20,000
Other CL   = ₹ 60,000 (balancing figure)
CL   = ₹ 80,000

(ii) **Liquid Ratio=** Quick Assets/CL (Excluding Overdraft) = 1.50 i.e., 1.50:1.00
1.0 - ₹ 60,000
1.5 -   ?
(1.5/1.00) × 60,000 = ₹ 90,000 (Quick Assets)
Stock = CA - Quick Assets
        = 2,00,000 - 90.000 **= ₹ 1,10,000**

(iii) Proprietary Ratio = (Fixed Assets/ Proprietary Funds) = 0.75
i.e., Working capital/ Proprietary Funds   = 0.25
Proprietary Funds = (1/0.25) × 1,20,000   = ₹ 4,80,000
Less: Reserves & Surplus   = ₹   80,000
Share Capital   = ₹ 4,00,000

(iv) Fixed Assets = 4,80,000 × 0.75 = ₹ 3,60,000.

Summarized Statement of Assets and Liabilities as on 31st March, 2017

Liabilities	₹	Assets		₹
Share capital	4,00,000	Fixed Assets		3,60,000
Reserves & Surplus	80,000	Current Assets :		
Current Liabilities:		Stock	1,10,000	
Bank Overdraft 20,000		Quick Assets	90,000	2,00,000
Other C.L 60,000	80,000			
Total	5,60,000	Total		5,60,000

(b) **Calculation of changes In Working Capital:**

Current Assets	2015 (₹)	2016 (₹)
Debtors	1,60,000	2,00,000
Stock	77,000	1,09,000
B/R	20,000	30,000
Cash in hand	15,000	10,000
Cash at Bank	10,000	8,000
A: Total Current Asset	**2,82,000**	**3,57,000**

Current Liabilities	2015 (₹)	2016 (₹)
Creditors	55,000	83,000
B/P	20,000	16,000
B: Total Current Liabilities	75,000	99,000
Working capital (A-B)	2,07,000	2,58,000

Increase in working capital = 2,58,000 – 2,07,000 = ₹ 51,000.

8. (a) **From the following data, compute the duration of the Operating Cycle for each of the two years:**

	Year 1 (₹)	Year 2 (₹)
Stock:		
Raw Materials	20,000	27,000
Work-in-progress	14,000	18,000
Finished goods	21,000	24,000
Purchases	96,000	1,35,000
Cost of goods sold	1,40,000	1,80,000
Sales	1,60,000	2,00,000
Debtors	32,000	50,000
Creditors	16,000	18,000

Assume 360 days per year for computational purposes.

(b) **The following information are available in respect of ABC company:**

Liabilities	Amount (₹)	Assets	Amount (₹)
Equity share capital	1,20,000	**Fixed Assets**	3,00,000
Retained Earnings	40,000	**Current Assets**	1,00,000
10% Long Term Debt	1,60,000		
Current Liabilities	80,000		
	4,00,000		4,00,000

The company's total assets turnover ratio is 3, its fixed operating costs are ₹ 2,00,000 and its variable operating cost ratio is 40%. The income tax rate is 50%. Calculate the different types of leverages, given that the face value of share is ₹ 10.   6+6=12

Answer:

8. (a)

	Year 1	Year 2
Current Assets: 1. Raw Material Stock= Stock of raw materials/Purchases x 360	(20/96)x360 =75 days	(27/135)x360 =72 days
2. W1P turnover=(WIP/COGS)x360	(14/140)x360 =36 days	(18/180)x360 =36 days
3. Finished goods turnover= (Finished goods/COGS)x360	(21/140)x360 =54 days	(24/180)x360 =48 days
4. Debtors Turnover=(Debtors/Sales) x360	(32/160)x360 =72 days	(50/200)x360 =90 days
Total (A)	237 days	246 days
Creditors period =(Creditors/Purchases)x360	(16/96)x360 =60 days	(18/135)x360 =48 days
Total (B)	60 days	48 days
Operating Cycle=(A-B)	(237-60) =177days	(246-48) =198 days

Abbreviation used: COGS – Cost of Goods Sold.

(b) Total Assets Turnover Ratio = Sales / Total Assets = 3

Or, Sales/4,00,000 = 3

Or, Sales = 12,00,000

	₹
Sales	12,00,000
Operating Cost (40%)	4,80,000
Contribution	7,20,000
Less Fixed Operating Cost	2,00,000
EBIT	5,20,000
Less interest (10% of 1,60,000)	16,000
PBT	5,04,000
Tax at 50%)	2,52,000
PAT	2,52,000
Number of shares	12,000
EPS	₹ 21

Degree of Operating Leverage = Contribution/EBIT = 7,20,000/5,20,000 = 1.38

Degree of Financial leverage = EBIT / PBT = 5,20,000/5,04,000 = 1.03

Degree of Combined Leverage =1.38 × 1.03 = 1.42

9. **(a) A company issued 10,000, 10% Preference Share of ₹ 10 each, cost of issue is ₹ 2 per share. Calculate cost of capital, assuming that the shares are issued (a) at par, (b) at 10% premium, and (c) at 5% discount.**

(b) FB Chemical Ltd. has three potential projects, all with an initial cost of ₹20,00,000 and estimated life of five years. The capital budget for the year will only allow the company to accept one of the three projects. Given the discount rates and the future cash flows of each project, which project should the company accept?
Project 1 has an annual cash flow of ₹ 5,00,000 and discount rate of 6%
Project 2 has an annual cash flow of ₹ 6,00,000 and discount rate of 9%
Project 3 has the following cash inflow and discount rate of 15%

Year	1	2	3	4	5
Cash Inflows ₹	10,00,000	8,00,000	6,00,000	2,00,000	1,00,000

6+6=12

Answer:

9. (a) Cost of preference capital, (Kp) = D/NP

Where, Kp = Cost of preference capital D = Annual preference dividend NP = Net proceeds of preference shares.

When issued at par: (₹ 10,000/10,000 × 8) × 100 =12.5%

b) When issued at 10% premium: (₹ 10,000/10,000 × 9) × 100 = 11.11%

c) When issued at 5% discount: (₹ 10,000/10,000 × 7.5) × 100 =11.11% =13.33%

(b) NPV = PV of Inflow - PV of outflow

Project 1's NPV = ₹ [5,00,000 (.943+.889+.839+.792+.747) - 20,00,000] = ₹1,05,000

Project 2's NPV = ₹ [6,00,000 (.917+.841+.772+.708+.649) - 20,00,000] = ₹3,32,200

Project 3's NPV = ₹ 20,31,900 - 20,00,000 = 31,900.

Project 2 should be accepted as its NPV is maximum.

10. **Write short note on any three of the following:** **4×3=12**
    (a) Net Income Approach of Capital Structure
    (b) Capital Asset Pricing Model
    (c) Financial Leverage
    (d) Window Dressing
Answer:

10. **(a) Net Income Approach:** This approach was advocated by David Durand. According to this approach, capital structure has relevancc3 and a firm can increase the value of

the firm and minimise the overall cost of capital by employing debt capital in its capital structure. Accordingly, greater the debt capital in the capital structure, lower shall be the overall cost of capital and more shall be the value of the firm. (Some assumptions may be included and the theory may be represented in graphical form).

(b) Capital Asset Pricing Model: Another technique that can be used to estimate the cost of equity is the capital asset pricing model approach. The capital asset pricing model explains the behaviour of security prices and provides a mechanism whereby investors could assess the impact of a proposed security investment on their overall portfolio risk and return. In other words, CAPM formally describes the risk required return trade off for securities. The assumptions for CAPM approach are:

i)   The efficiency of the security

ii)   Investor preferences.

The capital asset pricing model describes the relationship between the required rates of return, or the cost of equity capital and the non-diversifiable or relevant risk of the firm as reflected in its index of non-diversifiable risk. Symbolically,

$K_e = R_f + β (R_m - R_f)$

Where

K_e = Cost of equity capital

R_f = Risk free rate of return

R_m = Return on market portfolio

$β$ = Beta of Security

(c) Financial Leverage: The Financial Leverage may be defined as a % increase in EPS associated with a given percentage increase in the level of EBIT. Financial leverage emerges as a result of fixed financial charge against the operating profits of the firm. The fixed financial charge appears in case the funds requirement of the firm is partly financed by the debt financing. By using this relatively cheaper source of finance, in the debt financing, the firm is able to magnify the effect of change in EBIT on the level of EPS. The significance of DFL may be interpreted as follows:

➢   Other things remaining constant, higher the DFL, higher will be the change in EPS for same change in EBIT.

➢   Higher the interest burden, higher is the DFL, which means more a firm borrows more is its risk.

➢   Since DFL depends on interest burden, it indicates risk inherent in a particular capital mix, and hence the name financial leverage.

(d) Window Dressing: The term window dressing means manipulation of accounts in a way so as to conceal vital facts and present the financial statements in a way to show a better position than what it actually is. On account of such a situation, presence of a particular ratio may not be a definite indicator of good or bad management For example a high stock turnover ratio is generally considered to be an indication of operational efficiency of the business. But this might have been achieved by unwarranted price reductions or failure to maintain proper stock of goods.