

INTERMEDIATE EXAMINATION
GROUP - II
(SYLLABUS 2016)
SUGGESTED ANSWERS TO QUESTIONS
DECEMBER - 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 answer to all parts of a question together.
(ii) Open a new page for answer to a new questions.
(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: 1x6=6
- (i) Which statement best describes the role of the management accountant?
- (A) Management accountants prepare the financial statements for an organization.
- (B) Management accountants facilitate the decision-making process within an organization.
- (C) Management accountants make the principal decisions within an organization.
- (D) Management accountants are basically information collectors.
- (ii) In a factory when production is increased within the relevant range then:
- (A) variable costs will vary on a per unit basis.
- (B) variable costs will vary in total.
- (C) fixed costs will vary in total.
- (D) fixed and variable cost stay the same in total.

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- (iii) The main objective of budgetary control is:
- (A) to define the goal of the firm
 - (B) to coordinate different departments
 - (C) to plan to achieve its goals
 - (D) All of the above
- (iv) Method of pricing, when two separate pricing methods are used to price transfer of products from one subunit to another, is called:
- (A) dual pricing
 - (B) functional pricing
 - (C) congruent pricing
 - (D) optimal pricing
- (v) When are overhead variances recorded in a standard costing system?
- (A) When the goods are transferred out of work-in-progress.
 - (B) When the factory overhead is applied to work-in-progress.
 - (C) When the cost of goods sold is recorded.
 - (D) When the direct labour is recorded.
- (vi) Which of the following factors does not affect Learning Curve?
- (A) Method of Production
 - (B) Labour Strike
 - (C) Shut Down
 - (D) Efficiency Rate

- (b) Match the statement in Column I with the most appropriate statement in Column II:

1x4=4

Column I		Column II	
(i)	Market Based Price	(A)	Break-Even Analysis
(ii)	Decision Unit	(B)	Differential Cost
(iii)	Margin of Safety	(C)	Transfer Pricing
(iv)	Difference between costs of two alternatives	(D)	Zero-Base Budgeting

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

- (i) The profit calculated under absorption costing and marginal costing is always equal.
- (ii) A flexible budget takes into account only fixed costs.
- (iii) At break-even point, margin of safety is nil.
- (iv) An increase in production means an increase in overall productivity.

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Answer:

1. (a)

- (i) — (B)
- (ii) — (B)
- (iii) — (B)
- (iv) — (A)
- (v) — (B)
- (vi) — *

*Wrong question and no options are true. Student attempting this question has been given full 1 mark.

1. (b)

- (i) — (C)
- (ii) — (D)
- (iii) — (A)
- (iv) — (B)

1. (c)

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

Section II

Answer *any three* questions from Question No. 2, 3, 4 and 5.

Each question carries 12 Marks.

2. (a) The Asian Industries specialize in the manufacture of small capacity motors. The Cost Structure of a motor is as under:

Material ₹ 50

Labour ₹ 80

Variable overheads 75% of labour cost.

Fixed overheads of the company amounts to ₹ 2.4 lakhs per annum. The sale price of the motor is ₹ 230 each

- (i) Determine the number of motors that have to be manufactured and sold in a year in order to break-even.
- (ii) How many motors will have to be made and sold to make a profit of Rupees one lakh per year?

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(iii) If the sale price is reduced by ₹ 15 each, how many motors will have to be sold to break-even?

(b) The table below shows the Costs and Profits of three different products — X, Y & Z, manufactured by Jerbera Co. Ltd.

	X	Y	Z	Total
	₹	₹	₹	₹
Sales	3,00,000	1,80,000	1,20,000	6,00,000
Variable Cost	2,40,000	1,26,000	72,000	4,38,000
Contribution	60,000	54,000	48,000	1,62,000
Fixed Cost				81,000
Profit				81,000

Can the profits of the company be increased by changing the sales mix of the products? Use Marginal Costing technique to arrive at your answer. $6+(2+2+2)=12$

Answer:

2. (a)

(i) Sales Price		₹ 230
Less: Variable Cost		
Material (₹)	50	
Labour (₹)	80	
V.O/H	<u>60</u>	₹ 190
Contribution		<u>₹ 40</u>

B.E Sales × P/V Ratio = Fixed Cost

B.E. Sales × (230 - 190)/230 = ₹ 2,40,000

Or B.E. Sales = ₹ 13,80,000

or 13,80,000/230 = 6,000 motor

(ii) Total Contribution = ₹3,40,000 (Profit + fixed cost ₹2,40,000)

If the contribution is ₹40, the number of motors = 1

If the contribution is ₹3,40,000, the number of motors = 3,40,000 ÷ 40 = 8,500 motors.

(iii) Reduced Selling-Price ₹ 215

Less Variable Cost 190

Revised contribution 25

B.F. Sales = 2,40,000 ÷ 25 = 9,600 motors.

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2. (b)

Relative profitability of Products

	X	Y	Z	Total
	₹	₹	₹	₹
Sales	3,00,000	1,80,000	1,20,000	6,00,000
Variable Cost	2,40,000	1,26,000	72,000	4,38,000
Contribution	60,000	54,000	48,000	1,62,000
Fixed Cost				81,000
Profit				81,000
P/V Ratio	20%	30%	40%	27%

The above table shows that product Y and Z, are more profitable than X. Keeping total production same, company should change the sales mix in a way more of product Z and y are produced. If company decides to use its production capacity more for product Y and Z than X, then the effect on profit if sale of product Y and Z is increased by ₹ 60,000 each and product X by reducing ₹ 1,20,000.

	X	Y	Z	Total
	₹	₹	₹	
Sales	1,80,000	2,40,000	1,80,000	6,00,000
Variable Cost	1,44,000	1,68,000	1,08,000	4,20,000
Contribution	36,000	72,000	72,000	1,80,000
Fixed Cost				81,000
Profit				99,000

From the above table, we can observe that proposed change in product mix leads to an increase in profit from ₹ 81,000 to ₹ 99,000.

3. (a) X Ltd. uses budgetary control and standard costing system. The following data are available:

Product	Budgeted		Actual	
	Units to be sold	Sales value (₹)	Units sold	Sales value (₹)
A	100	1,200	100	1,100
B	50	600	50	600
C	100	900	200	1,700
D	75	450	50	300
	325	3,150	400	3,700

Calculate:

- (i) Sales Volume Variance
- (ii) Sales Price Variance
- (iii) Sales Variance

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- (b) The standard labour and the actual labour engaged in a week for a job are as under:

	Skilled workers	Semi-skilled workers	Unskilled workers
A. Standard number of workers in the gang	32	12	6
B. Standard rate of wages per hour (₹)	3	2	1
C. Actual number of workers employed in the gang during the week	28	18	4
D. Actual rate of wages per hour (₹)	4	3	2

During the 40-hour working week, the gang produced 1800 standard labour hours of work.

Calculate:

- (i) Labour Sub-efficiency Variance
- (ii) Labour Mix or Gang Variance
- (iii) Labour Efficiency Variance
- (iv) Labour Rate Variance
- (v) Labour Cost Variance

$$4\frac{1}{2} + 7\frac{1}{2} = 12$$

Answer:

3. (a)

SV₁ – Actual Sales realisation given = ₹3,700

SV₂ – Actual Sales at Standard Price =

Products	Units sold	Standard Price	Amount
		(₹)	(₹)
A	100	12	1,200
B	50	12	600
C	200	9	1,800
D	50	6	300
	400		3,900

SV₄ – Budgeted Sales = ₹ 3,150.

- (i) Sales Price Variance =

$$SV_1 - SV_2 = ₹ 3,700 - ₹ 3,900 \text{ or } ₹ 200(A)$$

- (ii) Sales Volume Variance =

$$SV_2 - SV_4 = ₹ 3,900 - ₹ 3,150 \text{ or } ₹ 750(F)$$

- (iii) Sales Variance = SV₁ – SV₄

$$= ₹3,700 - ₹ 3,150 \text{ or } ₹ 550(F).$$

3. (b)

Analysis of Given Data

	Standard Data			Actual Data		
	Hours	Rate (₹)	Value (₹)	Hours	Rate (₹)	Value (₹)
Skilled	1,280	3	3,840	1,120	4	4,480
Semi-skilled	480	2	960	720	3	2,160
Unskilled	240	1	240	160	2	320
	2,000		5,040	2,000		6,960

Computation of required values

	SRSH(1) (₹)	SRRSH (2)(₹)	SRAH (3)(₹)	ARAH (4) (₹)
Men	3x1,152 = 3,456	3,840	3x1,120 = 3,360	4,480
Women	2x432 = 864	960	2x720 = 1,440	2,160
Boys	1x216 = 216	240	1x160 = 160	320
	= 4,536	5,040	= 4,960	6,960

Computation of SH:

SH = (SH for that worker/SH for all the worker) x AQ for that worker.

For Skilled worker = $(1,280/2,000) \times 1,800 = 1,152$

For Semi-Skilled worker = $(480/2,000) \times 1,800 = 432$

For Un-Skilled worker = $(240/2,000) \times 1,800 = 216$

Where

(1) SRSH= Standard Cost of Standard Labour = ₹4,536

(2) SRRSH = Revised Standard Cost of Labour = ₹5,040

(3) SRAH = Standard Cost of Actual Labour = ₹4,960

(4) ARAH = Actual Cost of Labour = ₹6,960

Computation of Labour Variances:

(i) Labour Sub-efficiency Variance = (1)-(2) = $(4,536 - 5,040) = ₹ 504$ (A)

(ii) Labour Mix or Gang Variances (2)-(3) = $(5,040 - 4,960) = ₹ 80$ (F)

(iii) Labour Efficiency Variance = (1)-(3) = $(4,536 - 4,960) = ₹ 424$ (A)

(iv) Labour Rate Variance = (3)-(4) = $(4,960 - 6,960) = ₹ 2,000$ (A)

(v) Labour Cost Variance = (1)-(4) = $(4,536 - 6,960) = ₹ 2,424$ (A)

4. (a) A manufacturing company has two divisions — X and Y. Division X is mainly engaged in production of an electronic device and Division Y packs and labels the product and sells it in the market. Division X supplies 25,000 units of the product per month to Y for packaging and labelling. Division X incurs ₹ 16 as the variable cost for the product and fixed cost of ₹ 8,40,000 per year. Investment in fixed assets is ₹

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9,60,000. The division plans to have 12% return on fixed assets as normal profits. Division Y incurs ₹ 10 per product as variable expenses for packaging and marketing.

- (i) Find the Transfer Price per unit of the product that Division X can charge for transfer to Y.
 - (ii) What will be profit of Division Y if it can sell all the products in the market at ₹ 80 per unit?
 - (iii) If Division Y can sell only 15,000 units of the product per month and asks Division X to supply only 15,000 units, what will be the effect on the Transfer Price and the profits of the divisions?
- (b) As a Cost and Management Accountant of MJK Ltd., prepare a Sales Overhead Budget for the months of January, February and March from the estimates given below:

Expenses per month:	₹
Advertisement	2,500
Salaries of the Sales Department	5,000
Expenses of the Sales Department	1,500

Counter Salesmen's Salaries and Dearness Allowance 6,000

Commission to counter salesmen @ 1% on their sales. Travelling salesmen's commission @ 10% on their sales and expenses @ 5% on their sales.

The sales during the period were estimated as under:

Month	Counter Sales ₹	Travelling Salesmen Sales ₹
January	80,000	10,000
February	1,20,000	15,000
March	1,40,000	20,000
		(2+3+2)×5=12

Answer:

4. (a)

(i) Computation of Transfer Price:

To be charged by 'X' to 'y'

₹ OR ₹

Variable Cost per Unit	16.00	16.00
Fixed Cost per Unit (8,40,000/3,00,000)	2.80	2.80
Return per unit (9,60,000 x 12%)/3,00,000	0.384	4.608
	19.184	23.408

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(ii) **Computation of Profit of Division 'Y'**

Transfer price	19.184	23.408
Variable Cost	10.000	10.000
	29.184	33.408
Contribution & Profit per unit	= (80-29.184)	(80-33.408)
	= 50.816	= 46.592
Monthly Profit	= 25,000×50.816	= 25,000×46.592
	= ₹12,70,400	= ₹ 11,64,800

and

Yearly profit	= 3,00,000 × 50.816	= 3,00,000 × 46.592
	= ₹ 1,52,44,800	= ₹ 1,39,77,600

(iii) **Transfer Price:**

Variable Cost per Unit	16.00	16.00
Fixed Cost per Unit (8,40,000/1,80,000)	4.67	4.67
Return per unit (9,60,000 x 12%)/1,80,000	0.64	7.68
	21.31	28.35
Variable Cost for Packaging & Marketing	10.00	10.00
	31.31	38.35
Contribution & Profit per unit	48.69	41.65
	(80.00 – 31.31)	(80.00 – 38.35)

Note: Suitable assumptions are expected from students in case of 2nd alternative where return/unit is ₹ 4.608 or ₹ 7.68 as the case may be. In case of suitable assumptions with correct working, full marks are given. Otherwise, stepwise marking is given with justification.

4(b)

Sale Overhead Budget

	January	February	March
	₹	₹	₹
Counter Sales	80,000	1,20,000	1,40,000
Travelling Salesmen's Sales	10,000	15,000	20,000
Total Sales	90,000	1,35,000	1,60,000
<i>Sales Overheads</i>			
Variable:			
Commission on Counter Sales @ 1%	800	1,200	1,400
Travelling Salesman's Commission @ 10% on Travelling Salesmen's Sales	1,000	1,500	2,000

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Expenses on Travelling			
Salesmen's Sale @5%	500	750	1,000
<i>Fixed:</i>			
Advertisement	2,500	2,500	2,500
Salaries of the Sales Department	5,000	5,000	5,000
Expenses of the Sales Department	1,500	1,500	1,500
Counter Salesmen's Salaries and Dearness Allowance	6,000	6,000	6,000
Total Sales Overheads	17,300	18,450	19,400

5. Write short note on any three of the following:

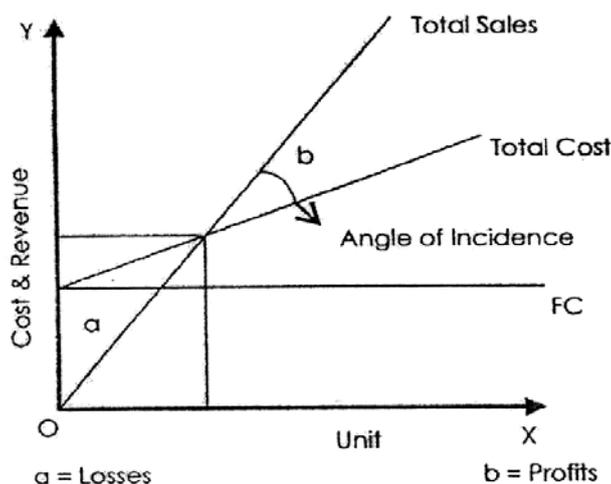
4x3=12

- (a) Break-even Analysis
- (b) Absorption Costing Vs. Marginal Costing
- (c) Zero Based Budgeting
- (d) Uniform Costing

Answer:

5. (a)

Break Even means the volume of production or sales where there is no profit or loss. In other words, Break Even Point is the volume of production or sales where total costs are equal to revenue. It helps in finding out the relationship of costs and revenues to output. In understanding the breakeven point, cost, volume and profit are always used. The break even analysis is used to answer many questions of the management in day to day business. The formal break even chart is as follows:



When no. of units are expressed on X-axis and costs and revenues are expressed on Y-axis, three lines are drawn i.e., fixed cost line, total cost line and total sales line. In the above graph we find there is an intersection point of the total sales line and total cost line and from that intersection point if a perpendicular is drawn to X-axis, we find break even units. Similarly, from the same intersection point a parallel line is drawn to X-axis so that it cuts Y-axis, where we find Break Even point in terms of value.

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5. (b)

Differences between Absorption costing and Marginal costing

Absorption Costing	Marginal Costing
Both fixed and variable costs are considered for product costing and inventory valuation.	Only variable costs are considered for product costing and inventory valuation.
Fixed costs are charged to the cost of production. Each product bears a reasonable share of fixed cost and thus the profitability of a product is influenced by the apportionment of fixed costs.	Fixed costs are regarded as period costs. The profitability of different products is judged by their P/V ratio.
Cost data are presented in conventional pattern. Net Profit of each product is determined after 'subtracting fixed cost along with their variable cost.	Cost data are presented to highlight the total contribution of each product.
The difference in the magnitude of opening stock and closing stock affects the unit cost of production due to the impact of related fixed cost.	The difference in the magnitude of opening stock and closing stock does not affect the unit cost of production.
In case of absorption costing the cost per unit reduces, as the production increases as it is fixed cost which reduces, whereas, the variable cost remains the same per unit.	In case of marginal costing the cost per unit remains the same, irrespective of the production as it is valued at variable cost.

5. (c)

Zero based budgeting starts with the premise that the budget for next period is zero so long the demand for a function, process, project or activity is not justified for each rupee from the first rupee spent. The assumptions are that without such a justification no spending will be allowed. The burden of proof thus shifts to each manager to justify why the money should be spent at all and to indicate what would happen if the proposed activity is not carried out and no money is spent. It differs from the conventional system of budgeting mainly it starts from scratch or zero and not on the basis of trends or historical levels of expenditure. In the customary- budgeting system, the last year's figures are accepted as they are, or cut back or increases are granted. The first step in the process of zero base budgeting is to develop an operational plan or decision package. A decision package identifies and describes a particular activity. For this purpose, each package should give details of costs, returns, purpose, expected results, the alternatives available and a statement of the consequences if the activity is reduced or not performed at all.

Zero-base Budgeting is more suitably applicable to discretionary- cost areas. These costs may have no relation to volume or activity and generally arise as a result of management policies. Where standards are determinable, those costs associated with the inputs should be controlled through the use of standard costing.

5. (d)

Uniform Costing is not a separate method or type of Costing. It is a technique of Costing and can be applied to any industry. Uniform Costing may be defined as the application and use of the same costing principles and procedures by different organisations under the same

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management or on a common understanding between members of an association. The main feature of uniform costing is that whatever be the method of costing used, it is applied uniformly in a number of concerns in the same industry, or even in different but similar industries. This enables cost and accounting data of the member undertakings to be compiled on a comparable basis so that useful and crucial decisions can be taken. The principles and methods adopted for the accumulation, analysis, apportionment and allocation of costs vary so widely from concern to concern that comparison of costs is rendered difficult and unrealistic. Uniform Costing attempts to establish uniform methods so that comparison of performances in the various undertakings can be made to the common advantage of all the constituent units.

The need for application of uniform Costing System exists in a business, irrespective of the circumstances and conditions prevailing therein. In concerns which are members of a trade association, the procedure for uniform Costing may be devised and controlled by the association or by any other central body specially formed for the purpose.

Part-B

(Financial Management)

Section-III

6. Answer the following questions:

(a) Choose the correct answer from the given four alternatives.

1x6=6

- (i) ROI (Return on Investment) can be decomposed into the following ratios:
- (A) Overall Turnover Ratio and Current Ratio
 - (B) Net Profit Ratio and Fixed Assets Turnover
 - (C) Working Capital Turnover Ratio and Net Profit Ratio
 - (D) Net Profit Ratio and Overall Turnover Ratio
- (ii) Which one of the following activities is outside the purview of dividend decision in financial management?
- (A) Identification of the profit after taxes
 - (B) Measurement of the cost of funds
 - (C) Deciding on the pay-out ratio
 - (D) Considering issue of bonus shares to equity shareholders
- (iii) Which of the following does not help to increase Current Ratio?
- (A) Issue of Debentures to buy Stock
 - (B) Issue of Debentures to pay Creditors
 - (C) Sale of Investment to pay Creditors
 - (D) Avail Bank Overdraft to buy Machine
- (iv) Which of the following statements is correct?
- (A) A higher Receivable Turnover is not desirable.
 - (B) Interest Coverage Ratio depends upon Tax Rate.
 - (C) Increase in Net Profit Ratio means increase in Sales.
 - (D) Lower Debt-Equity Ratio means lower Financial Risk.
- (v) "Shareholders' wealth" in a firm is reflected by:
- (A) the number of people employed in the firm.
 - (B) the book value of the firm's assets less the book value of its liabilities.
 - (C) the amount of salary paid to its employees.
 - (D) the market price per share of the firm.

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(vi) The excess of Current Assets over Current Liabilities is called:

- (A) Net Current Assets
- (B) Net Working Capital
- (C) Working Capital
- (D) All of the above

(b) Match the statement in Column I with the most appropriate statement in Column II.

1x4=4

Column I		Column II	
1.	Dividend policy has no effect on its value of assets	(A)	Myron Gordon
2.	Value of share is worth the present value of its future dividend rather than its earnings	(B)	Graham & Dodd
3.	Dividend policy has an impact on share valuations	(C)	John Burr Williams
4.	Market Price of share will increase when company declares dividend rather than when it does not	(D)	Modigliani & Miller

(c) State whether the following statements are *True or False*:

1x4=4

- (i) Treasury Bills are short term instruments issued by the Reserve Bank of India to address short term liquidity shortfalls.
- (ii) While calculating cost of redeemable debt, it is necessary to consider the repayment of the principal, but the interest can be ignored.
- (iii) A Depository Receipt in the US market is called American Depository Receipt (ADR).
- (iv) Net Present Value method cannot serve as the best decision criteria for selection of projects when they are mutually exclusive.

Answer:

6. (a)

- (i) — (D)
- (ii) — (B)
- (iii) — (D)
- (iv) — (D)
- (v) — (D)
- (vi) — (D)

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6. (b)

	Column 'A'		Column 'B'
1.	Dividend policy has no effect on its value of assets	(D)	Modigliani & Miller
2.	Value of share is worth the present value of its future Dividend rather than its earnings.	(C)	John Burr Williams
3.	Dividend policy has an impact on share valuations	(A)	Myron Gordon
4.	Market Price of share will increase when company declares dividend rather than when it does not	(B)	Graham & Dodd

6. (c)

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

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 statement of Proprietors' Funds:

- (i) Current Ratio = 2.5:1
- (ii) Fixed Assets/Proprietors Funds = 0.75
- (iii) Liquid Ratio = 1.5 : 1
- (iv) Bank Overdraft = ₹ 10,000
- (v) Reserves and Surplus = ₹ 80,000
- (vi) Working Capital = ₹ 1,20,000

(b) Prepare a schedule of Changes in Working Capital and a Fund Flow Statement from the following information relating to XYZ Co. Ltd.

(Amount in ₹)

Liabilities	31.03.2016	31.03.2017	Assets	31.03.2016	31.03.2017
Equity Share Capital	2,00,000	3,00,000	Land	2,00,000	2,00,000
Share Premium	—	10,000	Plant at cost	2,08,000	2,00,000
General Reserve	1,00,000	1,20,000	Furniture at cost	14,000	18,000
Profit and Loss Account	20,000	34,000	Investments	1,20,000	1,60,000
6% Debentures	1,40,000	1,00,000	Debtors	60,000	1,40,000

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Provision for Depreciation on Furniture	10,000	12,000	Stock	1,20,000	1,30,000
Provision for Depreciation on Plant	1,00,000	1,12,000	Cash	60,000	90,000
Provision for Taxation	40,000	60,000			
Sundry Creditors	1,72,000	1,90,000			
	7,82,000	9,38,000		7,82,000	9,38,000

A plant purchased for ₹ 8,000 (Depreciation 4,000) was sold on cash for ₹ 1,600 in October 2016. In July 2016, a piece of furniture was purchased for ₹ 4,000 and a dividend of 22.5% was paid to Equity Shareholders.

4+8=12

Answer:

7. (a)

If Working Capital = CA - CL = 1,20,000 and CA = 2.5 CL, then 2.5 CL - CL = 1,20,000

Therefore CL = 80,000 and CA = 2,00,000

Liquid Ratio = Quick Assets/CL = 1.5

Therefore Quick Assets = CL × 1.5 = 1,20,000

Since Quick Assets = CA - Stock, then Stock = CA - QA = 80,000

If Proprietors Funds are P then Fixed Assets = 0.75P

Proprietors Funds + CL = FA + CA

Or P + 80,000 = 0.75P + 2,00,000

Or 0.25 P = 1,20,000, or P = 4,80,000,

FA = 480000+80000-200000 = 3,60,000

Since Proprietary Funds are = Sh. Capital - Reserves, therefore Sh. Capital = 4,00,000

Statement of Proprietors Fund

	₹	₹
Proprietors Fund		
Share Capital	4,00,000	
Reserves and Surplus	80,000	4,80,000
Investment of Funds		
Fixed Assets	3,60,000	
Stock	80,000	
Other Current Assets	1,20,000	
Less Current Liabilities	80,000	4,80,000

SUGGESTED ANSWERS TO QUESTIONS_SYL2016_DEC2017_PAPER-10

Investment A/c

Particulars	₹	Particulars	₹
To bal. b/d	120000	By bal. c/f	160000
To bank -purchases(bal. fig)	40000		
	160000		160000

P&L A/c

Particulars	₹	Particulars	₹
To Dep.	18000	By balance	20000
To transfer to G/R	20000	By Fund from operations	99400
To loss on sale of plant	2400		
To dividend	45000		
To balance	34000		
	119400		119400

It is assumed that dividend is paid on original shares only.

8. (a) Jai & Karti are regular customers of MJK Ltd. Kolkata and have approached the sellers for extension of credit facility for enabling them to purchase goods from MJK Ltd. On the analysis of past performance and on the basis of information supplied, the following pattern of payment schedule emerges in regard to Jai & Karti:

Schedule	Pattern
At the end of 30 days	15% of the bill
60 days	34% of the bill
90 days	30% of the bill
100 days	20% of the bill
Non-recovery	1% of the bill

Jai & Karti wants to enter into a firm commitment for purchase of goods of ₹ 15,00,000 in 2016, deliveries to be made in equal quantities on the first day of each quarter in the calendar year. The price per unit of the commodity is ₹ 150 on which a profit of ₹ 5 per unit is expected to be made. It is anticipated by the MJK Ltd. that taking up of this contract would mean an extra recurring expenditure to ₹ 5,000 per annum. If the opportunity cost of funds in the hands of MJK Ltd. is 24% per annum, would you as a Management Accountant of the seller recommend the grant of credit to Jai & Karti? Working should form part of your answer.

- (b) Company A reports the following information from its financial statements.

	₹
Sales	8,00,000
Less: Variable cost	2,40,000
Contribution	5,60,000
Fixed Cost	4,00,000
EBIT	1,60,000
Less: Interest	20,000
Profit before Tax	1,40,000

SUGGESTED ANSWERS TO QUESTIONS_SYL2016_DEC2017_PAPER-10

Find out:

- (i) Using concept of financial leverage, by what percentage will the taxable income increase, if EBIT increases by 10%? Verify the results in terms of Rupees.
- (ii) Using the concept of operating leverage, by what percentage will EBIT increase if there is 10% increase in sales? Verify the results in terms of Rupees.

8+(2+2)=12

Answer:

8. (a)

(a) Incremental profit = $15,00,000 \times \frac{5}{150} = ₹ 50,000$

(b) Calculation of incremental finance cost $17,975^* \times 4 = ₹ 71,900$

*Sales per quarter = $\frac{15,00,000}{4} = ₹ 3,75,000$

Finance cost per quarter:

For 15% Of bill	$3,75,000 \times 15\% \times 24\% \times \frac{30}{360}$	1,125
For 34% of bill	$3,75,000 \times 34\% \times 24\% \times \frac{60}{360}$	5,100
For 30% of bill	$3,75,000 \times 30\% \times 24\% \times \frac{90}{360}$	6,750
For 20% of bill	$3,75,000 \times 20\% \times 24\% \times \frac{100}{360}$	5,000
Finance cost per quarter		17,975

(c) Extra recurring expenses = ₹ 5,000

(d) Bad debts = $15,00,000 \times 1\% = ₹ 15,000$

Therefore, incremental profit = a-b-c-d = $50,000 - 71,900 - 5,000 - 15,000 = ₹ 41,900$ (loss)

Comment : As there is incremental loss, it is advisable not to extend credit facility to Jai & Karti.

8. (b)

(i) Degree of Financial Leverage:

$$FL - EBIT/Profit \text{ before Tax} = 1,60,000/1,40,000 = 1.1428$$

If EBIT increases by 10%, the taxable income will increase by $1.1428 \times 10 = 11.428\%$ and it may be verified as follows:

EBIT (after 10% increase)	₹ 1,76,000
Less interest	20,000
Profit before Tax	1,56,000

Increase in taxable income is ₹ 16,000 i.e 11.428% of ₹1,40,000

SUGGESTED ANSWERS TO QUESTIONS_SYL2016_DEC2017_PAPER-10

(ii) Degree of Operating leverage:

$$OL = \text{Contribution}/\text{EBIT} = 5,60,000/1,60,000 = 3.50$$

If sale increases by 10%, the EBIT will increase by $3.50 \times 10 = 35\%$ and it may be verified as follow:

Sales (after 10% increase)	₹8,80,000
Less variable expenses @ 30%	2,64,000
Contribution	6,16,000
Less Fixed cost	4,00,000
EBIT	2,16,000

Increase in EBIT is ₹ 56,000 i.e. 35% of ₹ 1,60,000

9. (a) Given below is the Statement of Assets and Liabilities of a company as at 31st December, 2016.

Liabilities	₹	Assets	₹
Equity share capital	4,00,000	Fixed Assets	6,00,000
40000 shares of ₹ 100 each			
Reserve and surplus	2,60,000	Investments	1,00,000
8% debentures	1,70,000	Current assets	2,80,000
Current Liabilities			
Short term loans	1,00,000		
Trade creditors	50,000		
	9,80,000		9,80,000

Calculate the company's weighed average cost of capital using balance sheet valuations. The following additional information are also available.

- 8% Debentures were issued at par.
- All interests payments are up to date and equity dividend is currently 12%.
- Short term loan carries interest at 18% p.a.
- The shares and debentures of the company are quoted on the Calcutta Stock Exchange and current Market Prices are as follows:
Equity Shares at ₹ 14 each and 8% Debentures at ₹ 98 each.
- The rate of tax for the company may be taken at 50%.

(b) ZZZ Co. has four potential projects all with an initial cost of ₹ 15,00,000. The capital budget for the year will only allow the company to take up only one of the three projects. Given the discount rates and the future cash flows of each project, which project should they accept?

SUGGESTED ANSWERS TO QUESTIONS_SYL2016_DEC2017_PAPER-10

PROJECT	Annual Net Cash Flows per year for five years (₹)	Discount Rates
A	3,50,000	4%
B	4,00,000	8%
C	5,00,000	10%

7+5=12

Answer:

9. (a)

Calculation of the Cost of Equity:

	₹
Equity Share	4,00,000
Reserves and Surplus	<u>2,60,000</u>
Equity (Shareholder's) Fund	<u>6,60,000</u>

Book Value Per Share = $6,60,000/40,000 = ₹ 16.50$.

Equity Dividend Per Share = $12/100 \times 10 = ₹ 1.20$

Therefore, Cost Of Equity (%) = $1.20/16.50 \times 100 = 7.273\%$

Computation of Weighted Average Cost of Capital:

Capital Structure or

Type of Capital	Amount (₹)	Before Tax	After Tax	Weighted Average Cost %
Equity funds	6,60,000	7.273%	7.273%	48,000
Debentures	1,70,000	8%	4%	6,800
Total	8,30,000		54800	

Weighted Average Cost of Capital = $54800/8,30,000 \times 100 = 6.602\%$.

Question is wrong (40000 shares of ₹ 100 each).

Either, students can take 40,000 @ 10 each

OR 4,000 @ 100 each.

9. (b)

Project A

PV of Annuity of ₹ 3,50,000 for 5 years at 4% rate of discount —

$3,50,000 \times 4.452 = ₹ 15,58,200$

NPV = ₹ 15,58,200 - ₹ 15,00,000 = ₹ 58,200

Project B

PV of Annuity of ₹ 4,00,000 for 5 years at 8% rate of discount-

$4,00,000 \times 3.993 = ₹ 15,97,200$

NPV = ₹ 15,97,200 - ₹ 15,00,000 = ₹ 97,200

SUGGESTED ANSWERS TO QUESTIONS_SYL2016_DEC2017_PAPER-10

Project C

PV of Annuity of ₹ 5,00,000 for 5 years at 10% rate of discount-

$5,00,000 \times 3.791 = 18,95,500$

NPV = ₹18,95,500 - ₹ 15,00,000 = ₹ 3,95,500

Accept Project C

10. Write short notes on any three of the following:

4x3=12

- (a) Internal Rate of Return
- (b) Sweat Equity Shares
- (c) Venture Capital
- (d) Combined Leverage

Answer:

10. (a) Internal Rate of return

IRR method follows discounted cash flow technique which takes into account the time value of money. The internal rate of return is the interest rate which equates the present value of expected future cash inflows with the initial capital outlay. In other words, it is the rate at which NPV is equal zero. Whenever a project report is prepared, IRR is to be worked out in order to ascertain the viability of the project. This is also an important guiding factor to financial institutions and investors.

Formula:

$$C = \left[\frac{A_1}{(1+r)} + \frac{A_2}{(1+r)^2} + \dots + \frac{A_n}{(1+r)^n} \right]$$

Where C = Initial Capital outlay.

A1, A2, A3 etc. = Expected future cash inflows at the end of year 1,2, 3 and so on.

r = Rate of interest

n = Number of years of project

In the above equation – 'r' is to be solved in order to find out IRR.

Computation of IRR

The Internal rate of return is to be determined by trial and error method. The following steps can be used for its computation, (i) Compute the present value of the cash flows from an investment, by using arbitrary by selected interest rate, (ii) Then compare the present value so obtained with capital outlay, (iii) If the present value is higher than the cost, then the present value of inflows is to be determined by using higher rate, (iv) This procedure is to be continued until the present value of the inflows from the investment are approximately equal to its outflow, (v) The interest rate that bring about equality is the internal rate of return.

10. (b) Sweat Equity Shares:

As per Sec 2(88) of the Companies Act 2013 — Sweat equity shares means such equity shares as are issued by a company to its directors or employees at a discount or for consideration, other than cash, for providing their knowhow or making available rights in the nature of intellectual property rights or value additions, by whatever name called.

A company may issue sweat equity shares of a class of shares already issued, if the following conditions are fulfilled: (a) the issue is authorised by a special resolution passed by the company; (b) the resolution specifies the number of shares, the current market price, consideration, if any, and the class or classes of directors or employees to whom such equity shares are to be issued; (c) not less than one year has, at the date of such issue, elapsed since the date on which the company had commenced business; and (d) where the equity shares of the company are listed on a recognised stock exchange, the sweat equity share issued in accordance with the regulations made by the Securities and Exchange Board in this behalf and if they are not so listed, the sweat equity shares are issued in accordance with rule 8 of Companies (Share Capital and Debenture) Rules, 2014.

10. (c) Venture Capital:

Venture Capital is a form of equity financing especially designed for funding high risk and high reward projects. There is a common perception that Venture Capital is a means of financing high technology projects. However, Venture Capital is investment of long term financial made in: 1. Ventures promoted by technically or professionally qualified but unproven entrepreneurs, or 2. Ventures seeking to harness commercially unproven technology, or 3. High risk ventures. The term 'Venture Capital' represents financial investment in a highly risky project with the objective of earning a high rate of return.

Modes of Finance by Venture Capitalists

1. Equity Most of the venture capital funds provide financial support to entrepreneurs in the form of equity by financing 49% of the total equity. This is to ensure that the ownership and overall control remains with the entrepreneur. Since there is a great uncertainty about the generation of cash inflows in the initial years, equity financing is the safest mode of financing. A debt instrument on the other hand requires periodical servicing of debt.
2. Conditional Loan From a venture capitalist point of view, equity is an unsecured instrument hence a less preferable option than a secured debt instrument. A conditional loan usually involves either no interest at all or a coupon payment at nominal rate. In addition, a royalty at agreed rates payable to the lender on the sales turnover. As the units pick up in sales interest rate are increased and royalty amounts are decreased.
3. Convertible Loans the convertible loan "is subordinate" to all other loans which may be converted into equity if interest payments are not made within agreed time limit.

10. (d) Combined Leverage:

A combination of the operating and financial leverages is the total or Combination Leverage. The operating leverage causes a magnified effect of the change in sales level on the EBIT level and if the financial leverage combined simultaneously, then the change in EBIT will, in turn, have a magnified effect on the EPS. A firm will have wide fluctuations in the EPS for even a small change in the sales level. Thus effect of change in sales level on the EPS is known as combined leverage. Thus Degree of Combined Leverage may be calculated as follows:

DCL=Contribution/Earning after Interest.