

**Paper 10 - Cost & Management Accounting and
Financial Management**

INTERMEDIATE EXAMINATION

GROUP - II

(SYLLABUS 2016)

SUGGESTED ANSWERS TO QUESTIONS

DECEMBER – 2019

**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 workings must form part of your answer.

Wherever necessary, Candidates may make appropriate assumptions and clearly state them.

- Please
- (1) Write answers to all parts of a question together.
 - (2) Open a new page for answers to a new question.
 - (3) Attempt the required number of questions only.

This paper has been divided into two part A & B, each carrying 50 marks.

Further each part has been divided into two sections each.

Part-A

(Cost & Management Accounting)

(50 Marks)

Section-I

Answer the following questions.

1. (a) Choose the correct answer from the given four alternatives (You may write only the Roman numeral and alphabet chosen for your answer): 1X6=6
 - (i) A budget that gives a summary of all the functional budgets and projected Profit and Loss A/c is known as
 - (A) Master budget
 - (B) Flexible budget
 - (C) Performance budget
 - (D) Discretionary budget
 - (ii) When there are no opening or closing stocks, profit under marginal costing will be
 - (A) Greater than in absorption costing
 - (B) Less than in absorption costing
 - (C) Equal to absorption costing
 - (D) Greater, Lower or Equal depending on certain factors

- (iii) Break Even Point can be reduced by
- (A) Increasing selling price per unit
 - (B) Reducing the variable costs
 - (C) Reducing fixed costs
 - (D) All of the above
- (iv) One of the following is not within the scope of Management Accounting
- (A) Formulation of policies
 - (B) Classification and collection of costs
 - (C) Planning and co-ordinating the activities of the enterprise
 - (D) Decision making on alternative courses of action
- (v) AB company budgets for fixed overhead of ₹24,000 and Production of 4800 units. Actual Production is 4200 units. If fixed overhead cost increased is ₹22,000, the Fixed overhead volume variance will be
- (A) ₹1,000 (Adv.)
 - (B) ₹2,000 (Fav.)
 - (C) ₹3,000 (Adv.)
 - (D) ₹3,000 (Fav.)
- (vi) Which one of the following does not describe a Transfer Pricing Method?
- (A) Negotiated Transfer Pricing
 - (B) Market Price based Transfer Pricing
 - (C) Fixed Cost Based Transfer Pricing
 - (D) Opportunity Cost based Transfer Pricing

- (b) Match the statement under Column I with the most appropriate statement under Column II (You may Opt to write only the numeral and the matched alphabet instead of coping the contents into the answer book): 1 X 4=4

	Column-I		Column-II
(i)	Absorption Costing	(A)	is concerned with accounting information, which is useful to Management.
(ii)	Management Accounting	(B)	at which total revenue is equal to total cost.
(iii)	Break Even Point	(C)	is frequently used in conjunction with establishing bid price for contract.
(iv)	Learning Curve	(D)	both fixed and variable costs are considered for inventory valuation.

- (c) State whether the following statements are True or False (You may write only the Roman numeral and whether True or False without copying the statement into the answer book): 1X4=4
- (i) A Sequential profit graph is prepared when multiple products are produced.
 - (ii) Management Accounting is largely based on accuracy than estimates.

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(iii) Zero-Base budgeting is more suitably applicable to Discretionary Cost areas.

(iv) The PV ratio increases when the fixed cost of a firm decreases.

Answer :

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

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

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

Section-II

Answer any three questions from question number 2, 3, 4 and 5.

Each question carries 12 marks.

2. (a) REAXON LTD. a manufacturing company provides you the following details for the year 2018.

Sales (16,000 units)	₹16,00,000
Less Expenses (including ₹ 8,00,000 Fixed Expenses)	₹17,60,000
Net loss	₹ 1,60,000

The manager believes that an increase of ₹4,00,000 in advertising outlays will increase sales substantially. His plan was approved by the chairman of the board:

Required:

- (i) Calculate P/V Ratio and Break Even Sales.
(ii) What additional sales will be required to offset that increase in advertisement outlays?
(iii) What should be selling price per unit if the breakeven point is brought down to 20,000 units?

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- (b) ZEESLIN LTD. has furnished the following relevant information for the two years:

Year ended March 31	2018	2019
Sales	₹ 9,30,000	?
Profit/Volume Ratio (P/V ratio)	50%	38%

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Margin of Safety sales as a % of total sales	40%	22%
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There has been substantial savings in the fixed cost in the year 2019 due to the restructuring process. The company could maintain its sales quantity level of 2018 in 2019 by reducing selling price.

You are required to calculate the following:

- (i) Sales for 2019 in ₹
- (ii) Fixed cost for 2019
- (iii) Break-even sales for 2019 in Rupees.

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Answer :

2. (a)

- (i) Calculation of P/V Ratio and Break Even Sales (BES) :

$$\text{P/V Ratio} = \frac{\text{Sales} - \text{Variable Cost}}{\text{Sales}} \times 100$$

$$\text{P/V Ratio} = \frac{16,00,000 - 9,60,000}{16,00,000} \times 100$$

$$\text{P/V Ratio} = 40\%$$

$$\begin{aligned}\text{BEP (Sales)} &= \frac{\text{Fixed Cost}}{\text{P/V Ratio}} \\ &= (\text{₹ } 8,00,000 + \text{₹ } 4,00,000) / 40\% \\ &= \text{₹ } 30,00,000\end{aligned}$$

Or,

$$\begin{aligned}\text{BEP (Sales) Unit} &= (\text{₹ } 8,00,000 + \text{₹ } 4,00,000) / (\text{₹ } 100 - \text{₹ } 60) \\ &= \text{₹ } 12,00,000 / \text{₹ } 40 \\ &= 30,000 \text{ units.}\end{aligned}$$

- (ii) Additional Sales Volume = $\frac{\text{Proposed Expenditure}}{\text{P/V Ratio}}$
= ₹ 4,00,000 / 40%
= ₹ 10,00,000

- (iii) Selling price if BEP is 20000 units:

$$\text{BEP} = \text{Fixed cost} / \text{contribution}$$

$$20,000 = 12,00,000 / C, \text{ or } C = \text{₹ } 12,00,000 / 20,000 = \text{₹ } 60$$

$$S - V = C$$

$$\text{Sales} - \text{₹ } 60 = \text{₹ } 60$$

$$\text{Sales} = \text{₹ } 60 + \text{₹ } 60 = \text{₹ } 120$$

Or,

$$\begin{aligned}\text{SP per unit} &= \text{VC Per unit} + (\text{Contribution} / \text{BEP}) \\ &= \text{₹ } 60 + (\text{₹ } 12,00,000 / 20,000) \\ &= \text{₹ } 120\end{aligned}$$

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- (b) In 2018 P/V Ratio = 50 %
 Variable cost ratio = 100% – 50% = 50%
 Variable cost in 2018 = ₹ 9,30,000 × 50% = ₹ 4,65,000

In 2019 sales quality has not changed. Thus variable cost in 2019 is ₹4,65,000.

- In 2019 P/V ratio = 38%
 Thus, variable cost ratio = 100% – 38% = 62%

- (i) Thus sales in 2019 = ₹4,65,000/62% = ₹7,50,000

At break-even point, fixed cost is equal to contribution.

- In 2019, break-even sales = 100% - 22% (MS) = 78%

- (ii) Break-even sales = ₹7,50,000 × 78% = ₹5,85,000

- (iii) Fixed cost = B.E. Sales × P/V ratio = ₹5,85,000 × 38% = ₹2,22,300

3. (a) **ESKAY LTD.** a manufacturing company operating Standard Costing System produces a product Cemco by blending two basic raw materials. The following standard have been set up for materials:

Material	Standard Mix	Standard Price per kg.
A	40%	20
B	60%	30

Standard loss in process is 10%. During the month of September 2019 the Company produced 182 kg of Cemco. The Cost records for the period showed the following usage:

Material	Quantity(Kg)	Price per kg(₹)
A	90	18
B	110	34

You are required to calculate the following Material Variances:

- (i) Material Cost Variance (MCV)
 (ii) Material Price Variance (MPV)
 (iii) Material Usage Variance (MUV)

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- (b) The following information is extracted from the records of ALJHON LTD. a manufacturing company using standard costing system for the month ending October, 2019.

	Budget	Actual
Fixed Overhead	₹10,000	₹12,000
Production(units)	2,000	2,100
Standard Time per Unit (hours)	10	--
Actual Hours Worked	--	21,000

Required:

Calculate the following Fixed Overhead Variances:

- (i) Fixed Overhead Cost Variance

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(ii) Fixed Overhead Expenditure Variance

(iii) Fixed Overhead Volume Variance

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Answer :

3. (a) Basic Calculation

Material	Standard for 180 kg. output			Actual for 182 kg. output		
	Qty.(kg.)	Rate(₹)	Amount(₹)	Qty.(kg.)	Rate(₹)	Amount(₹)
A	80	20	1,600	90	18	1,620
B	120	30	3,600	110	34	3,740
Total	200		5,200	200		5,360
Less: Standard Loss	20			18		
	180		5,200	182		5,360

Standard Cost of Actual Output = ₹5,200 × $\frac{182}{180}$ = ₹ 5,257.78

Calculation of Variances:

1. Material Cost Variance = (Standard cost of actual output – Actual Cost)
= (₹5,257.78 – 5,360) **= ₹102.22 (A)**

2. Material Price Variance = (SP – AP) × AQ

Material A = (20 – 18) × 90 = ₹ 180.00 (F)

Material B = (30 – 34) × 110 = ₹ 440.00 (A)
= ₹ 260.00 (A)

3. Material Usage Variance = (Std. Quantity for actual output – Actual Quality) × Std. Price

Material A = $\left(80 \times \frac{182}{180} - 90\right) \times 20$ = ₹ 182.22 (A)

Material B = $\left(120 \times \frac{182}{180} - 110\right) \times 30$ = ₹ 340.00 (F)
= ₹ 157.78 (F)

(b) For Fixed Overhead Variance:

Actual Fixed Overhead incurred (Given) ₹12,000

Budgeted Fixed Overhead for the period ₹10,000

Standard Fixed overhead for production

= (Standard output for actual time X Standard Fixed Overhead per unit)

= 2100 unit X (₹ 10,000 ÷ 2,000 unit) ₹10,500

(i) Fixed Overhead Variance = Standard F.O. – Actual F.O.
= ₹10,500 – ₹12,000
= ₹1,500 (A)

(ii) F.O. Expenditure Variance = Budgeted F.O. – Actual F.O.
= ₹10,000 – ₹12,000

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= ₹2,000 (A)

(iii) F.O. Volume Variance

= Standard F.O. – Budgeted F.O.

= ₹10,500 – ₹10,000

= ₹500 (F)

4. (a) The following data have been compiled for TTA Tea Co regarding the budgeted and actual production of green tea packets for six months ending 30 June, 2019.

Production	(Amount in ₹)	
	Units 40,000 (Budgeted)	Units 50,000 (Actual)
Material Consumed	1,35,000 (45,000 kgs @ ₹3 per Kg.)	1,89,750 (55,000 kgs @ ₹3.45)
Wages at 3 hrs. per unit	1,80,000 (@ ₹1.5 per hr.)	2,44,500 (@ ₹1.63 per hr.)
Variable Overheads	80,000 (@ ₹2 per unit)	1,25,000 (@ ₹2.5 per unit)
Fixed Overheads	75,000	1,00,000
Total	4,70,000	6,59,250

During the budgeted period:

- (i) Production is expected to go up to 60,000 units.
- (ii) Material required is expected to go up to 65,000 kgs for production.
- (iii) The prices of materials are expected to increase further in the same manner as they had increased over the budgeted price.
- (iv) Labour charges are expected to increase by ₹ 0.50 per hour above the actual rate shown above though efficiency is expected to decline by 20%.
- (v) Variable overheads are expected to increase by 10% over June 2019 Actual.
- (vi) Fixed overheads are expected to increase by 20% over June 2019 Actual.

You are required to prepare the Production Cost Budget for the six months ending 31st December 2019.

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- (b) Division Z of STAREX LTD. is a profit center which produces four products A, B, C and D. Each product is sold in the external market also. Following data are available for the period:

	A	B	C	D
Market price per unit (₹)	600	580	560	510
Variable cost of production per unit (₹)	520	400	360	335
Labour hours required per unit (₹)	3	4	2	3

Product D can be transferred to division Y, but the maximum quantity that may be required for transfer is 15,000 units of D.

The maximum sales in the external market are:

- A 16,800 units
- B 15,000 units
- C 13,800 units
- D 9,600 units

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Division Y can purchase the same product at a price of ₹500 per unit from outside instead of receiving transfer of product D from Division Z. 7

Required:

What should be the transfer price for each unit for 15,000 units of D, if the total Labour hours available in division Z are 1,20,000 hours.

Answer:

4. (a) Production Cost Budget for the Six months ending 31st December, 2019.

Particulars	Actual 6 months ending June 2019		Budget 6 months ending December 2019		
		Total		Total	Cost/unit (₹)
Production Level (Units)		50,000		60,000	
Materials	55,000 kgs x ₹3.45	1,89,750	65,000 kgs x ₹3.968	2,57,920	4.30
Wages	50,000 x 3 hrs. x ₹1.63	2,44,500	60,000 x 3.75hrs. x @₹2.13	4,79,250	7.99
Variable Overheads	50,000 kgs x ₹2.5	1,25,000	60,000 kgs x ₹2.75	1,65,000	2.75
Fixed Overheads		1,00,000		1,20,000	2.00
Total		6,59,250		10,22,170	17.04

Notes: Material cost increase is 15% over Budget figures. For six month ending Dec. 2019, an increase 15% over ₹3.45 is ₹3.968 Labour efficiency decreased by 20% leads to 3.75hrs. Total time required is 225000 hrs.

(b) Ranking a product when Labour hours is key factor :

Products	A(₹)	B(₹)	C(₹)	D(₹)
Market or Sales Price/ unit	600	580	560	510
Less: Variable Cost/ unit	520	400	360	335
Contribution/unit	80	180	200	175
Labour Hour/unit	3	4	2	3
Contribution per Labour Hour	26.67	45	100	58.33
Ranking(Priority)	IV	III	I	II
Maximum Demand	16,800	15,000	13,800	9,600

If the Capacity is 120000 hours (Limited);

Allocation of 120000 hrs (Units X L. Hr/Unit) 3600 60000 27600 28800
on the basis of ranking (Ranking figure)

Time required meeting the demand of 15000 units of product D for division Y is 45000 hrs. The requirements of time viz.45000 hrs for providing 15000 units of product D for Division Y can be meet by sacrificing 3600 hrs. of product A (1200 units) and 41400 hours of products B (10350 units).

The required Transfer Price of Product D will be:

Variable cost + opportunity cost (contribution lost)

$$= 335 + \frac{[(45 \times 41400 + 26.67 \times 3600)]}{15000}$$

$$= 335 + \frac{(1863000 + 96012)}{15000}$$
$$= 335 + 130.60 = ₹465.60$$

5. Write short notes on any three out of the following:

4x3= 12

- (a) Significance of Management Accounting
- (b) Zero-Base Budgeting (ZBB)
- (c) Limitations of Uniform Costing
- (d) Uses of Learning Curve (LC)

Answer:

5. (a) Significance of Management Accounting

The various advantages that accrue out of management accounting are enumerated below:

- (1) Delegation of Authority: Now a days the function of management is no longer personal. Management accounting helps the organization in proper delegation of authority for the attainment of the vision and mission of the business.
- (2) Need of the Management: Management Accounting plays the role in meeting the need of the management.
- (3) Qualitative information: Management Accounting accumulates the qualitative information so that management would concentrate on the actual issue to deliberate and attain the specific conclusion even 'for the complex problem.
- (4) Objective of-the Business: Management Accounting provides measure and reports to the management thereby facilitating in attainment of the objective of the business

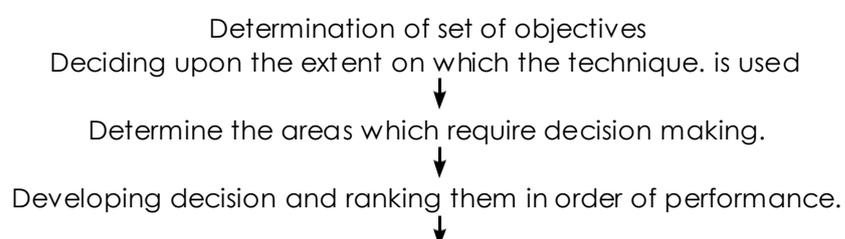
(b) ZERO BASE BUDGETING (ZBB) :

ZBB was introduced by Peter Pnyrs in 1969 who defined it as "a planning and budgeting process which requires each manager to justify his entire budget request in detail from scratch (hence zero base). Each manager states why he should append any money at all. This approach requires that all activities be identified as decision packages which will be evaluated by systematic analysis ranked in order of importance". According to CIMA London, ZBB is defined as "a method of budgeting whereby all-activities are revalued-each time a budget is set". Discrete levels activity are valued and combination chosen to match funds available.

Features of ZBB

1. All budget items old or new are considered afresh.
2. Amount spent on each budgets totally justified.
3. Departmental objectives are linked to corporate goals.
4. Cost benefit analysis of each budget is undertaken.
5. Managers at all level participate in ZBB.

Process of ZBB



Preparation of budget and allocation of resources.

(c) Limitations of Uniform Costing:

- Uniform costing requires adoption of uniform standards and principles which sometimes due to different circumstances become difficult.
- Uniform costing involve sharing of information which sometimes .becomes undesirable for some firms.
- Uniform costing sometimes becomes expensive for small firms.
- Uniform costing promotes monopolistic tendency.
- The standards of uniform costing are sometimes misunderstood by member firms.
- For smaller unit it is costly i.e. cost of installation and operation may be more than the benefits derived.
- Develop monopolistic tendencies.

(d) Uses of learning curve:

Knowledge of learning curve can be useful both in planning and control. Standard cost for new operations should be revised frequently to reflect the anticipated learning pattern.

Its main uses are summarized below:

- (i) Helps to analyze. Cost-Volume-Profit (CVP) relationship during familiarization phase of product or process. Learning curve can be used as a tool for forecasting.
- (ii) Helps in developing budgets and profit planning of the project.
- (iii) Helps in development of advantageous pricing policy.
- (iv) It helps design engineers in making decisions based upon expected (predictable from past experience) rates of improvement.
- (v) It is very useful to the Government in negotiations about the contracts.
- (vi) It is quite helpful in setting standards in learning phase.

Part-B

(Financial Management)

(50 Marks)

Section-III

Answer the following questions.

6. (a) Choose the correct answer from the given four alternatives (You may write only the Roman numeral and alphabet chosen for your answer): 1 X 6 = 6
- (i) Of the product of which two ratios is the ROI composed?
- (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) A firm determines the shareholders' wealth by taking
- (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.

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- (C) the amount of salary paid to its employees.
 (D) the market price per share of the firm.
- (iii) Capital Budgeting techniques which considers the time value of money is based on
 (A) Cash Flows of the organization
 (B) Accounting Profit of the organization
 (C) Interest Rate on Borrowings
 (D) Last Dividend Paid
- (iv) Debt Financing is a cheaper source of finance because of
 (A) Time Value of Money.
 (B) Rate of Interest.
 (C) Tax-deductibility of Interest.
 (D) Dividends not Payable to lenders.
- (v) What should be the optimum Dividend payout ratio, when $r=12\%$ and $K_e=10\%$?
 (A) Zero
 (B) 50%
 (C) 12%
 (D) 100%
- (vi) The term Float is used in
 (A) Receivable Management
 (B) Cash Management
 (C) Marketable Management
 (D) Inventory Management
- (b) Match the statement under Column I with the most appropriate statement under Column II (You may Opt to write only the numeral and the matched alphabet instead of coping the contents into the answer book): 1 X 4 = 4

Column-I		Column-II	
(i)	Defensive interval Ratio	(A)	Exporter relinquishes the right to a receivable due in future for immediate cash payment
(ii)	Capital Asset pricing model	(B)	Two control limits are used for managing Balances
(iii)	Forfeiting	(C)	Risk-return trade off securities
(iv)	Miller and Orr model of Cash Management	(D)	Liquidity of a firm in relation to its ability to meet daily operating expenditure

- (c) State whether the following statements are True or False (You may write only the Roman numeral and Whether True or False without coping the statement into the answer book): 1 X 4 = 4
- (i) Wealth maximization goal is only an extension of profit maximization goal of the organization.

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- (ii) Cost of capital is not the minimum required rate of earning or the cut off rate of capital Expenditure.
- (iii) Low degree of operating leverage and high degree of financial leverage is not an ideal situation.
- (iv) IRR indicated that the discounting rate at which net present value is Zero.

Answer:

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

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

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

Section-IV

Answer any three questions from question numbers 7, 8, 9 and 10.

Each question carries 12 marks.

7. (a) With the help of the following information, complete the Balance Sheet of MENWOOD LTD. as at 31st March, 2019.

Equity share capital	₹1,00,000	
The relevant ratios of the company are as follows:		
Current debt to total debt	0.40	
Total debt to owner's equity (Equity Shares Capital)	0.60	
Fixed assets to owner's equity (Equity Shares Capital)	0.60	
Total assets turnover	2 Times	
Inventory turnover	8 Times	6

- (b) SHELLICOLA (IND) LTD. has furnished the following information for the year ended 31st march, 2019

	(₹ in Lakhs)
Net profit	35,500.00
Dividend (including interim dividend paid)	10,000.00
Provision for Income Tax	7,500.00
Income Tax paid during the year	6,300.00
Loss on sale of assets (net)	60.00
Book value of assets sold	250.00
Depreciation charged to P&L Account	30,000.00
Profit on Sale of investments	150.00

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Value of investments sold	40,650.00
Interest expenses (due during the year)	15,000.00
Interest paid during the year	15,780.00
Increase in working capital (excluding cash and bank balance)	84,100.00
Purchase of fixed assets	840.00
Opening cash and bank balances	1,032.50
Closing cash and bank balances	12,912.50

You are required to prepare the cash flow statement in accordance with AS 3 (Revised) ended March 31st, 2019. 6

Answer:

7. (a)

Balance Sheet As at 31st March 2019

Liabilities	Amount(₹)	Assets	Amount(₹)
Equity Share Capital	1,00,000	Fixed Assets	60,000
Current debt	24,000	Cash	60,000
Long-Term Debt	36,000	Inventory	40,000
	1,60,000		1,60,000

Working Notes:

1. Total debt = $0.60 \times \text{Equity Shares} = 0.60 \times ₹1,00,000 = ₹60,000$
 Current debt to total debt = 0.40, hence current debt = $0.40 \times ₹60,000 = ₹24,000$
2. Fixed assets = $0.60 \times \text{Equity Shares} = 0.60 \times ₹1,00,000 = ₹60,000$
3. Total Liabilities = Total debt + Equity Shares Capital = $₹60,000 + ₹1,00,000 = ₹1,60,000$
 (Assets= Liabilities+ Equity Share Capital).
 Since fixed assets are ₹60,000, hence, current assets should be ₹1,00,000.
4. Total assets to turnover = 2 times: inventory turnover = 8 times
 Hence, inventory/total assets = $2/8 = 1/4$,
 Total assets = ₹1,60,000
 Therefore, inventory = $₹1,60,000/4 = ₹40,000$,
 Balance on Asset side is Cash = $₹1,00,000 - ₹40,000 = ₹60,000$

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(b)

SHELLICOLA LTD.

Cash follow statement for the year ended March 31, 2019

(a)	Cash Flows from Operating Activities:	(₹) in Lakhs
	Net Profit before taxation (35,500+7,500)	43,000
	Adjustment for :	
	Depreciation charged to P&L A/c	30,000
	Loss on sale of assets (net)	60
	Profit on sale of investments	(150)
	Interest expenses	<u>15,000</u>
	Operating profit before working capital changes	87,910
	Increase in working capital (excluding cash & bank balance)	<u>(84,100)</u>
	Cash generated from operations	3,810
	Less: Income tax paid	<u>(6,300)</u>
	Net cash used in operating activities (A)	<u>(2,490)</u>
(b)	Cash Flows from Investing Activities:	
	Sale of assets (250-60)	190
	Sale of investment (40,650+150)	40,800
	Purchase of fixed assets	<u>(840)</u>
	Net cash used in investing activities (B)	<u>40,150</u>
(c)	Cash Flows from Financing Activities:	
	Interest paid	<u>(15,780)</u>
	Dividend paid (incl. interim dividend)	<u>(10,000)</u>
	Net cash from financing activities (C)	<u>(25,780)</u>
	Net increase in cash and cash equivalent (A+B+C)	11,880
	Cash and cash equivalents at the beginning of the year	<u>1,032</u>
	Cash and cash equivalents at the end of the year	<u>12,912</u>

8. (a) BENTECH (I) LTD. is presently having credit sales of ₹12 lakh. The existing credit terms are 1/10, net 45 days and average collection period is 30 days. The current bad debts loss is 1.5%. In order to accelerate the collection process further as also to increase sales, the company is contemplating liberalization of its existing credit terms to 2/10, net 45 days. It is expected that sales are likely to increase by 1/3 of existing sales, bad debts increase to 2% of sales and average collection period to decline to 20 days. The contribution to sales ratio of the company is 22% and opportunity cost of investment in receivables is 15 per cent (pre-tax). 50 per cent and 80 per cent of customers in terms of sales revenue are expected to avail cash discount under existing and liberalization scheme respectively. The tax rate is 30%.
(Assume 360 days in a year).

Required:

Should the company change its credit terms?

6

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(b) NESTINO LTD. had the following Balance Sheet as on March 31, 2019.

Liabilities and Equity	₹ (in crores)	Assets	₹ (in crores)
Equity Share Capital (one crore shares of ₹10 each)	10	Fixed Assets (Net)	25
Reserves & Surplus	2	Current Assets	15
15% Debentures	20		
Current Liabilities	8		
	40		40
The additional information given is as under:			
Fixed Costs per annum (exclusive interest)		: ₹8 crores	
Variable operating cost ratio		: 65%	
Total Assets turnover ratio		: 2.5	
Income tax rate		: 40%	

Required:

Calculate the following:

- (i) Earnings per share
- (ii) Operating Leverage
- (iii) Financial Leverage
- (iv) Combined Leverage

6

Answer :

8. (a) Evaluation of Credit Policy

Working Notes:

- (i) Calculation of Cash discount

Cash Discount = Total credit Sales X % of customers who take up discount X Rate

$$\text{Present Policy} = \frac{12,00,000 \times 50 \times .01}{100} = ₹ 6,000$$

$$\text{Proposed Policy} = 16,00,000 \times 0.80 \times 0.02 = ₹25,600$$

- (ii) Opportunity Cost of Investment in Receivables

$$\text{Present Policy} = 9,36,000 \times (30 / 360) \times (70\% \text{ of } 15) / 100 = 78,000 \times 10.5/100 = ₹8,190$$

$$\text{Proposed Policy} = 12,48,000 \times (20/360) \times 10.50/100 = ₹7,280$$

Statement showing Evaluation of Credit Policies

Particulars	Present Policy (₹)	Proposed Policy (₹)
Credit Sales	12,00,000	16,00,000
Variable Cost @ 78% of Sales	9,36,000	12,48,000
Bad Debts @ 1.5% and 2%	18,000	32,000
Cash discount	6,000	25,600

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Profit before tax	2,40,000	2,94,400
Tax @30%	72,000	88,320
Profit after Tax	1,68,000	2,06,080
Opportunity Cost of Investment in Receivables	8,190	7,280
Net Profit	1,59,810	1,98,800

Advise: proposed policy should be adopted since the net benefit is increased by
 (₹1,98,800 – ₹1,59,810)= ₹38,990.

8. (b)

Total Assets = ₹ 40 crores
 Total Asset Turnover Ratio = 2.5
 Hence, Total Sales = ₹ 40 × 2.5 = ₹100 crores

Computation of Profits after Tax (PAT)

Particulars	₹(in crores)
Sales	100.00
Less: Variable operating cost @65%	65.00
Contribution	35.00
Less: Fixed cost (other than interest)	8.00
EBIT	27.00
Less: Interest on debentures (15% X 20)	3.00
PBT	24.00
Less: Tax@40%	9.60
Profit After Tax (PAT)	14.40

(i) Earnings per share

(EPS) = Profit after Tax (PAT) / No. of Equity shares

$$\therefore \text{EPS} = \frac{\text{₹14.4 crores}}{1 \text{ crore equity shares}} = \text{₹14.40}$$

(ii) Operating Leverage = $\frac{\text{Contribution}}{\text{EBIT}} = \frac{35}{27}$
 = 1.296

(iii) Financial Leverage = $\frac{\text{EBIT}}{\text{PBT}} = \frac{27}{24}$
 = 1.125

(iv) Combined Leverage = $\frac{\text{Contribution}}{\text{EBIT}} \times \frac{\text{EBIT}}{\text{PBT}}$
 = 1.296 × 1.125
 = 1.458

9. (a) The following is the capital structure of ZENITH LTD.:

Source of Capital	Book Value (₹)	Market Value (₹)
Equity Shares @₹100 each	80,00,000	1,60,00,000
9% Cumulative preference shares @₹100 each	20,00,000	24,00,000
11 per cent debentures	60,00,000	66,00,000

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Retained earning	40,00,000	-
	2,00,00,000	2,50,00,000

The current market price of the company's equity share is ₹200. For the last year the company had paid equity dividend at 25 per cent and its dividend is likely to grow 5 per cent every year. The corporate tax rate is 30 per cent and shareholders personal income tax rate is 20 per cent.

You are required to calculate:

- (i) Cost of capital for each source of capital.
- (ii) Weighted average cost of capital on the basis of market value weight. 6

- (b) MONPTEK LTD. wants to replace its old machine with a new automatic machine. Two models A and B are available at the same cost of ₹5 lakhs each. Salvage value of the old machine is ₹1 lakh. The utilities of the existing machine can be used if the company purchases A. Additional cost of utilities to be purchased in that case is ₹1 lakh. If the company purchases B then all the existing utilities will have to be replaced with new utilities costing ₹1.8 lakhs. The earnings after taxation are expected to be:

Year	(cash in-flows of)		
	A ₹	B ₹	P.V. Factor @15%
1	1,00,000	2,00,000	0.87
2	1,50,000	2,10,000	0.76
3	1,80,000	1,80,000	0.66
4	2,00,000	1,70,000	0.57
5	1,70,000	40,000	0.50
Salvage value at the end of Year 5	50,000	60,000	

The targeted return on capital is 15%.

Based on Profitability Index Criterion, advise the company on which machine should be taken up by it. 6

Answer:

9. (a)

- (i) Calculation of Cost of Capital for each source of capital :

1. Cost Equity Capital:

$$\begin{aligned}
 K_e &= \frac{DPS(1+g)}{MP} \times 100 + g \\
 &= \frac{25(1+0.05)}{200} \times 100 + 5 \\
 &= \frac{26.25}{200} \times 100 + 5 \\
 &= 13.125 + 5 = 18.125\%
 \end{aligned}$$

2. Cost of Preference Capital or $K_p = 9\%$.

3. Cost of Debentures: K_d (after tax) = $r(1-T) = 11(1-0.3) = 7.7\%$

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(ii) Weighted Average Cost of Capital (On the basis of Market value weights)

Source	(Market Value) (₹)	Weight	Cost of Capital (after tax) (%)	WACC (%)
(1)	(2)	(3)	(4)	(5)=(3)×(4)
Equity Capital	1,60,00,000	0.640	18.125	11.600
Preference Share Capital	24,00,000	0.096	9	0.864
Debentures	66,00,000	0.264	7.7	2.033
Retained Earnings	-	-	-	-
	2,50,00,000	1,000		14.497

Hence, WACC on the basis of Market Value Weights = 14.497%. ie 14.50%

(b)

(i) Expenditure at year zero

Particulars	Machine A (₹) in Lakh	Machine B (₹) in Lakh
Cost of Machine	5.00	5.00
Cost of Utilities	1.00	1.80
Salvage of old machine	(1.00)	(1.00)
	5.00	5.80

(ii) Discounted value of Cash inflows

Year	NPV Factor@15%	Machine A		Machine B	
		Cash inflows	Discounted value of inflows	Cash inflows	Discounted value of inflows
1	0.87	1.00	0.87	2.00	1.74
2	0.76	1.50	1.14	2.10	1.60
3	0.66	1.80	1.19	1.80	1.19
4	0.57	2.00	1.14	1.70	0.97
5	0.50	1.70	0.85	0.40	0.20
Salvage	0.50	0.50	0.25	0.60	0.30
Present value of Net Cash Inflow			5.44		6.00

$$\text{Profitability Index} = \frac{\text{Sum of PV of net Cash Inflow}}{\text{Initial Cash Outflow}}$$

$$\text{Machine A} = \frac{\text{₹ 5.44 lakh}}{\text{₹ 5.00 lakh}} = 1.088$$

$$\text{Machine B} = \frac{\text{₹ 6.00 lakh}}{\text{₹ 5.80 lakh}} = 1.034$$

Advice: Since the profitability Index is higher in the case of Machine A, it is better to choose Machine - A.

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

4×3=12

(a) Process of Debt Securitization

- (b) Determinants of Working Capital
- (c) Significance of Degree of Financial Leverage
- (d) Need of Capital Budgeting Decision.

Answer:

10. (a) Process of debt securitization :

Process of debt securitization is as follows:

- The loans are segregated into relatively homogeneous pools.
- The basis of pool is the type of credit, maturity pattern, interest rate, risk etc.
- The assets pools are then transferred to a trustee.
- The trustee then issues securities which are purchased by investors.
- Such security(asset pool) are sold on the undertaking without recourse to seller.

In this way conversion of debts to securities is known as Debt securitization.

(b) Determinants of working capital

- Nature and size of the business
- Production policies
- Process of manufacture
- Growth and Expansion of Business
- Fluctuations in the Trade cycle.
- Terms and conditions of purchases and sales
- Dividend policy
- Price level changes
- Operating Efficiency
- Percentage of profits and appropriation out of profits
- Other Factors like co-ordination and control, market facilities sector of working, government policy, Tax consideration, availability of Labor and means of transport & communication system.

(c) Significance of Degree of Financial Leverage (DFL):

- Higher the DFL more is the risk.
- Higher the interest burden, higher is DFL, which means more a firm borrows more is its risk.
- Since DFL depends on interest burden, it indicates risk inherent in a particular mix and hence the name financial leverage.
- There is a unique DFL for each amount of EBIT

$$DFL = \frac{\text{Earning before Interest and tax}}{\text{Earning after interest}} = \frac{EBIT}{EBT}$$

(d) Need of Capital Budgeting Decision:

The selection of the next profitable Project of capital investment is the key Function of Financial Manager. The decisions taken by the management in this area affect the operations of the firm for many years.

Capital budgeting decisions may be generally needed for the following purposes:

- (i) **Expansion:** Firm requires additional funds to invest in Fixed in Fixed assets when it intends to expand the production facilities.
- (ii) **Replacement:** The machines and equipments used in production may either wear out or may be rendered obsolete due to new technology. The firm needs funds for modernization and renovation.
- (iii) **Diversification:** Diversification in production would require large funds for long term investment.
- (iv) **Buy or Leases:** This is most important area in financial management whether the firm acquires the desired equipment and building on lease or buy it.
- (v) Research and development.