

INTERMEDIATE EXAMINATION

**GROUP - II
(SYLLABUS 2016)**

SUGGESTED ANSWERS TO QUESTIONS

JUNE - 2018

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.

This Paper has been divided into two Parts A & B, each carrying 50 marks.
Further each part has been further divided into two sections each.

**Part – A
(Cost and Management Accounting)**

**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): 1×6=6
- (i) Decision-marking concerns with:
(A) Past
(B) Future
(C) Past and Future both
(D) None of the above
- (ii) A large Margin of Safety indicates
(A) Over-Capitalization
(B) The soundness of business
(C) Over Production
(D) None of the above
- (iii) Revision of budgets is
(A) Unnecessary
(B) Cannot determine
(C) Necessary
(D) Inadequate data
- (iv) Which of the following operating measures would a manager would like to see decreasing over time?
(A) Merchandise Inventory Turn-over
(B) Total quality cost
(C) % of on-time deliveries
(D) Finished Goods Inventory Turn-over

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- (v) Which of the following departments is most likely responsible for a Price Variance in Direct Materials?
(A) Warehousing
(B) Receiving
(C) Purchasing
(D) Production

- (vi) Another name for the 'Learning Curve' is
(A) Exponential Curve
(B) Growth Curve
(C) Production Curve
(D) Experience Curve

- (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 copying contents into the answer books.): 1x4=4

Column I		Column II	
1	Distinctive feature of Learning curve	(A)	on the principle of exception.
2	Standard Costing works	(B)	is designed to fix responsibilities on executives, through the preparation of budgets.
3	Budgetary Control System	(C)	is that notional value at which goods and services are transferred between divisions in a decentralized organization.
4	Transfer Price	(D)	Persons engaged in repetitive task will improve his performance over time.

- (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 Statements into the answer books.): 1x4=4

- (i) Management Accounting is largely based on estimates and as such total accuracy is not ensured under Management Accountancy.
(ii) The main objective of Budgetary control is to co-ordinate the different departments.
(iii) Standard Costing are applicable in Banking Industry.
(iv) Learning Curve is a Cost Reduction technique.

Answer:

1. (a) (i) (B)
(ii) (B)
(iii) (C)
(iv) (B)
(v) (C)
(vi) (D)
- (b) (1) (D)
(2) (A)
(3) (B)
(4) (C)
- (c) (i) True
(ii) False
(iii) False
(iv) False

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Section - II

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

2. (a) QUALITY PRODUCTS LTD., manufactures and markets a single product. The following data are available:

	₹/Unit
Materials	16
Conversion Costs (Variable)	12
Dealer's Margin (10% of Sales)	4
Selling Price	40
Fixed Cost: ₹ 5 Lakhs	
Present Sales : 90,000 units	
Capacity Utilization : 60%	

There is acute competition. Extra efforts are necessary to sell. Suggestions have been made for increasing sales:

- (A) By reducing Selling Price by 5%
(B) By increasing dealer's margin by 25% over the existing rate.

Required:

- (i) Which of these two suggestion you would recommend, if the company desires to maintain the present profit?
(ii) Give reasons. 4+2=6

- (b) XYZ Co. purchases 40,000 glass cases per annum from an outside supplier at ₹ 5 each. The production manager feels that these should be manufactured and not purchased. A machine costing ₹ 1,00,000 (no salvage value) will be required to manufacture the item within the factory. The machine has an annual capacity of 60,000 units and life of 5 years. The costs required for manufacture of each glass case is as follows:

Direct Materials	₹ 2.00
Direct Labour	₹ 1.00
Variable overheads	100% of Labour Cost

Required:

- (i) Should the company continue to purchase the glass cases from outside supplier or should it make them in the factory?
(ii) Should the company accept an order to supply 10000 glass cases to the market at a selling price of ₹ 4.50 per unit? 3x2=6

Answer:

2. (a) Present Variable Cost/unit:

	₹
Materials	16
Conversion Costs	12
Dealer's Margin	4
Total Variable Cost/unit	32

Contribution/unit = Selling Price /unit- Variable Cost /unit = ₹ 40 - ₹ 32 = ₹8
∴ Total Contribution = ₹ 8 x 90,000 units = ₹ 7,20,000

In both the suggestion, Fixed Cost remains unchanged.

∴ The Present Profit of ₹ 2,20,000 (₹ 7,20,000 - ₹ 5,00,000) can be maintained by maintaining the total contribution at the present level i.e., ₹ 7,20,000.

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(A) Reducing Selling Price by 5%:

New Selling Price	₹ 40 - ₹ 2 or ₹ 38.
New Dealer's Margin	10% of ₹ 38 or ₹ 3.80
New Variable Cost	₹ 16 + ₹ 12 + ₹ 3.80 = ₹ 31.80.
New Contribution/unit	₹ 38 - ₹ 31.80 = ₹ 6.20.

Sales(in units) required to maintain present level of profit
= Total Contribution/(Contribution/unit) = ₹ 7,20,000/ ₹ 6.20 = 1,16,129 units.

(B) Increasing Dealer's Margin by 25%:

New Margin will be (₹ 4 +25% of ₹ 4) = ₹ 4 + ₹ 1 = ₹ 5.

New Variable Cost = ₹ 16 + ₹ 12 + ₹ 5 = ₹ 33

Contribution = ₹ 40 - ₹ 33 = ₹ 7.

Sales in units = ₹ 7,20,000/ ₹ 7 or 1,02,857 units.

Recommendation:

The 2nd Proposal is recommended because the contribution/unit is higher and the Sales (in units) are lower. Lower sales effort and lesser finance would be required in implementing the 2nd Proposal. The company can earn higher profits by increasing its sales, as an alternative.

(b) (i) Total variable cost of manufacturing one glass case = ₹ 4.00

Additional Fixed cost of manufacture p.a.

Depreciation (1,00,000 x 1/5) = ₹ 20,000

Since the marginal cost of manufacturing the case is less than the supplier's price of ₹ 5, there shall be a saving of ₹ (₹ 5 - 4) or ₹ 1 per case if the Case is manufactured within the factory. Manufacturing will however result in an additional fixed cost of ₹ 20,000 p.a.

Total saving = 40,000 cases @ ₹ 1	= ₹ 40,000
Less additional fixed cost (depreciation)	= ₹ 20,000
Net Savings	= ₹ 20,000

Therefore it is advisable to manufacture the cases in the factory.

(ii) If the company accepts to sell additional 10,000 units at 4.50, then additional contribution is 10,000 × 0.50 = ₹ 5,000. This will add to total profit.

3. (a) The Standard Material cost to produce a tonne of prefabricated building material of AJANTA LTD. is:

300 kgs. of material X @ ₹ 10 per kg.

400 kgs. of material Y @ ₹ 5 per kg.

500 kgs. of material Z @ ₹ 6 per kg.

During December 2017, 100 tonnes of mixture prefabricated building material were produced from the usage of:

35 tonnes of material X at a cost of ₹ 9,000 per tonne

42 tonnes of material Y at a cost of ₹ 6,000 per tonne

53 tonnes of material Z at a cost of ₹ 7,000 per tonne

Required:

Calculate the following variances:

(i) Total material cost variance

(ii) Total and individual material price variances

(iii) Total and individual material usage variances

2x3=6

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(b) The following details are available for ABC LTD. A manufacturing company:

	Budgeted Expenses, units & hrs.	Actual Expenses, units & hrs.
Variable Overheads (₹)	5,00,000	5,20,000
Output in units	50,000	40,000
Working hours	2,50,000	2,20,000

You are Required to Calculate the following variances:

- (i) Variable Overhead Expenditure Variance
- (ii) Variable Overhead Efficiency Variance
- (iii) Total Variable Overhead Variance

2x3=6

Answer:

3. (a)

Material	Standard			Actual		
	Quantity kg	Rate ₹	Amount ₹	Quantity kg	Rate ₹	Amount ₹
X	30,000	10.00	3,00,000	35,000	9.00	3,15,000
Y	40,000	5.00	2,00,000	42,000	6.00	2,52,000
Z	50,000	6.00	3,00,000	53,000	7.00	3,71,000
Total	1,20,000		8,00,000	1,30,000		9,38,000

(a) Material Cost Variance:

$$\text{Standard Cost for Actual Quantity} - \text{Actual Cost} \\ = ₹ 8,00,000 - ₹ 9,38,000 = ₹ 1,38,000 \text{ (A)}$$

(b) Material Price Variances. AQ (AP- SP)

$$X : 35,000 (9-10) = ₹ 35,000 \text{ (Favourable)}$$

$$Y : 42,000 (6-5) = ₹ 42,000 \text{ (Adverse)}$$

$$Z : 53,000 (7-6) = ₹ 53,000 \text{ (Adverse)}$$

$$\text{Total MPV} = ₹ 60,000 \text{ (Adverse)}$$

(c) Material Usage Variances SP (AQ - SQ)

$$X : 10 (35,000 - 30,000) = ₹ 50,000 \text{ (Adverse)}$$

$$Y : 5 (42,000 - 40,000) = ₹ 10,000 \text{ (Adverse)}$$

$$Z : 6 (53,000 - 50,000) = ₹ 18,000 \text{ (Adverse)}$$

$$\text{Total MUV} = ₹ 78,000 \text{ (Adverse)}$$

(b) Standard Variable Overhead per unit ₹ 5,00,000/50,000 = ₹ 10

Standard Variable Overhead per hour 5,00,000/2,50,000 = ₹ 2

Time allowed per unit of output = 2,50,000/50,000 = 5 hours

(a) Variable Overhead Expenditure Variance = AH × SR - AOVH

$$= (2,20,000 \times 2) - 5,20,000$$

$$= ₹ 80,000 \text{ Adverse}$$

(b) Variable Overhead Efficiency Variance = {standard time for actual production

$$(2,00,000 \text{ hrs}) \times \text{SR per hour (2)} - \{\text{Actual hrs (2,20,000)} \times \text{SR per hour (2)}\} = ₹$$

$$40,000 \text{ Adverse.}$$

(c) Total Variable Overhead Variance = Actual output (40,000) × SR-per unit (10)-

$$\text{Actual Overhead (5,20,000)} = 1,20,000 \text{ Adverse.}$$

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4. (a) PENTAX LTD., has prepared its Expense Budget for 20,000 units in its factory for a year as detailed below:

Particulars	₹/unit
Direct Material	50
Direct Labour	20
Variable Overhead	15
Direct Expenses	6
Selling Expenses (20% Fixed)	15
Factory Expenses (100% Fixed)	7
Administrative Expenses (100% Fixed)	4
Distribution Expenses (85% Variable)	12
Total (₹)	129

Required:

Prepare an Expenditure Budget for the Production of 15,000 units and 18,000 units. 6

- (b) JANAK LTD. received an order to make and supply sixteen units of standard product which involves intricate labour operations. The first unit was made in 8 hours. It is understood that this type of operations is subject to 90% learning rate. The workers are getting a wage rate of ₹ 15 per hour.

Required:

What is the total time and labour cost required to execute the above order? 6

Answer:

4. (a)

Particulars	Situation-I	Situation-II	Situation-III
Production level	20,000	15,000	18,000
Direct Material @ ₹ 50 per unit	20,000x50 = 10,00,000	15,000x50 =7,50,000	18,000x50 =9,00,000
Direct Labour @ ₹ 20 per unit	20,000x20 =4,00,000	15,000x20 =3,00,000	18,000x20 =3,60,000
Variable Overhead @ ₹ 15 per unit	20,000x15 =3,00,000	15,000x15 =2,25,000	18,000x15 =2,70,000
Direct Expenses @ ₹ 6 per unit	20,000x6 =1,20,000	15,000x6 =90,000	18,000x6 =1,08,000
Selling Expenses	60,000	60,000	60,000
Fixed = {20,000x(20% of ₹15)}	20,000x12	15,000x12	18,000x12
Variable = (80% of ₹15) = ₹ 12 pu	=2,40,000	= 1,80,000	=2,16,000
Factory Expenses(100% Fixed)	20,000x7 =1,40,000	=1,40,000	=1,40,000
Administrative Expenses (100% Fixed)	20,000x4 =80,000	=80,000	=80,000
Distribution Expenses (15% of ₹12)(-Fixed)	20,000x(12x15%) =36,000	=36,000	=36,000
Distribution Expenses (85% of ₹12)(-Variable) = ₹ 10.20 per unit	20,000x 10.20 =2,04,000	15,000x10.20 =1,53,000	18,000x10.20 =1,83,600
Total Expenses	25,80,000	20,14,000	23,53,600

- (b) 90% Learning Curve results are as given below:

Production (units)	Cumulative Average Time (Hours)	Total time (Hours)
1	8	8
2	7.2	14.4
4	6.48	25.92
8	5.832	46.66
16	5.2488	83.98

Labour time required for first 16 units = 83.98 hrs.

Labour cost required for 16 units = 83.98 hours × ₹ 15/- hr = ₹ 1,259.70

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

4×3=12

- (a) Concept of Management Accounting
- (b) Performance Budgeting
- (c) Transfer Pricing
- (d) Difference between Standard Costing and Budgetary Control, (any four)

Answer:

5. (a) Concept of Management Accounting:

Management Accounting is a new approach to accounting. The term 'Management Accounting' is composed of two words-Management and Accounting. It refers to Accounting for the Management. Management Accounting is a modern tool to management. Management Accounting provides the techniques for interpretation of accounting data. Here, accounting should serve the needs of management. Management is concerned with decision-making. Therefore, the role of Management Accounting is to facilitate the process of decision-making by the management. Managers in all types of organizations need information about business activities to plan accurately for the future and make decisions for achieving the goals of the enterprise. Uncertainty is the characteristic of the decision-making process. Uncertainty cannot be eliminated altogether, but can be reduced. The function of Management Accounting is to reduce this uncertainty and help the management in the decision-making process. Management Accounting is that field of accounting, which deals with providing information including financial accounting information to managers for their use in planning, decision-making, performance evaluation, control management of costs and cost determination for financial reporting. Management Accounting contains reports prepared to fulfill the needs of managements.

(b) Performance Budgeting: is synonymous with Responsibility Accounting, which means that the responsibility of various levels of management is predetermined in terms of output or result keeping in view the authority is vested with them.

Performance budget is a budget that reflects the input of resources and the output of services for each unit of an organization. This type of budget is commonly used by the government to show the link between the funds provided to the public and the outcome of these services.

Performance budgeting is a method of budgeting that provides the purpose and objectives for which funds are needed, costs of programs and related activities proposed to accomplish those objectives and outputs to be produced or services to be rendered under each program. Performance budgeting follows the validation that a relaxation of input controls and an increased flexibility enhances managers' performance as long as results are measured and managers are held responsible for their results. The major aim of performance budgeting is to improve the efficiency of public expenditure, by linking the funding of public sector organizations to the results they deliver. It adopts organized performance information (indicators, evaluations, program costings) to make this link. There is a good impact of performance budgeting on organizations in terms of improved prioritization of expenditure, and in improved service effectiveness.

Performance budgeting is based on a classification of managerial level for the purpose of establishing a budget for each level. The individual in charge of that level should be made responsible and held accountable for its performance over a given period of time.

(c) Transfer Pricing:

A 'Transfer Price' is that notional value at which goods and services are transferred between divisions in a decentralized organization. Transfer Pricing has become

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necessary in highly decentralized companies where number of divisions/departments are created as a part and parcel of the decentralized organization. Transfer Pricing is one of the tools in the hands of management for measuring the performance of divisions or departments.

Transfer Prices are normally set for intermediate products, which are goods and services that are supplied by the selling division to the buying division. In large organization, each division is treated as a 'profit center' as a part and parcel of decentralization. Their profitability is measured by fixation of 'transfer price' for inter-divisional transfers. The transfer Price can have a big impact on the division's performance and hence a lot of care is to be taken in the fixation of the same. The transfer Price should motivate the divisional managers to maximize the profitability of their divisions. It should allow 'Goal Congruence', which means that the objectives of divisional managers match with those of the organization.

(d) Difference between Standard Costing and Budgetary Control:

Standard Costing	Budgetary Control
i. Standards are based on technical assessments	Budgets are based on past actuals adjusted to future trends
ii. Standards are mainly for production expenses i.e., elements of cost	Budgets are compiled for sales, production, expenses, Profit, capital expenditure.
iii. Standard cost is projection of cost accounts.	Budgets are projects of financial accounts
iv. Standards are minimum targets which are to be attained	Budgets are the maximum limits of expenses above which expenditure should not be incurred.
v. Standards are pointers to further improvements.	Budgets are indices, adherence to which keeps a business out of problems.
vi. Variances are accounted for in the books.	Variance analysis is only a statistical data
vii. Standards are expressed per unit of production	Budgets are expressed in totals of amounts
viii. Detailed analysis is needed in case of variances, whether they are favourable or unfavourable.	No further analysis is required if costs are within the budget.

Part – B (Financial Management)

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): 1×6=6

(i) Which of the following is a Profitability Ratio?

- (A) Proprietary Ratio
- (B) Debt-Equity Ratio
- (C) Price-Earning Ratio
- (D) Fixed Asset Ratio

(ii) Which of the following is not a source of fund?

- (A) Issue of Capital

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- (B) Issue of Debenture
- (C) Decrease in Working Capital
- (D) Increase in Working Capital

(iii) β (Beta) of a security measures its

- (A) Divisible Risk
- (B) Financial Risk
- (C) Market Risk
- (D) None of the above

(iv) The following is not a Discounted Cash Flow Technique:

- (A) NPV
- (B) PI
- (C) Accounting of Average Rate of Return
- (D) IRR

(v) The 'Dividend-Payout Ratio' is equal to

- (A) The Dividend yield plus the capital gains yield
- (B) Dividends per share divided by Earning per Equity Share
- (C) Dividends per share divided by par value per share
- (D) Dividends per share divided by current price per share

(vi) If EBIT = ₹ 1,00,000, Fixed Assets = ₹ 2,00,000, Sales = ₹ 10,00,000 and Variable Cost = ₹ 7,00,000. Then, the Operating Leverage will be

- (A) 2
- (B) 3
- (C) 6
- (D) 4

(b) Match the statement under Column I with the most appropriate statement under Column II: 1x4=4

Column I		Column II	
1.	Dividend Models	(A)	Modigliani and Miller Hypothesis
2.	Theory of Capital Structure	(B)	Fund Based Financial service
3.	Factoring	(C)	Indicator of Short-term solvency of a company
4.	Liquid Ratio	(D)	Gorden Model

(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 statements into answer the books.) 1x4=4

- (i) Debt Service Coverage Ratio indicates the liquidity of a firm in relation to its ability to meet projected daily expenditure from operations.
- (ii) Bill Discounting is defined as the relationship between the seller of goods and a financial firm, called the Factor.
- (iii) Finance is called the "Chemistry of money".
- (iv) Capital Budgetary Forecasts Returns on proposed long-term investments and compares profitability of different Investments and their cost of capital.

Answer:

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

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- (b) (1) (D)
 (2) (A)
 (3) (B)
 (4) (C)
- (c) (i) False
 (ii) False
 (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) The following is the summary of Financial Ratios and form of a TEXTILE COMPANY having a sale of ₹ 32 lakh.

Sales to net worth (times)	2.3
Current debt to net worth (%)	42
Total debt to net worth (%)	75
Current ratio (times)	2.9
Net sales to inventory (times)	4.7
Fixed assets to net worth (%)	53.2

Proforma Balance Sheet

Net worth	---	Fixed assets	---
Long-term debt	---	Cash	---
Current debt	---	Stock	---
		Sundry debtors	568889
	---		---

You are required to Complete the Proforma Balance Sheet.

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- (b) INDOGROWTH LTD provides the following data:
 Comparative trial balance

	March 31, 2018	March 31, 2017	Increase (decrease)
	₹	₹	₹
Debit Balance			
Working capital	2,00,000	1,00,000	1,00,000
Investments	1,00,000	1,50,000	(50,000)
Building & Equipment	5,00,000	4,00,000	1,00,000
Land	40,000	50,000	(10,000)
	8,40,000	7,00,000	1,40,000
Credit Balance			
Accumulated depreciation	2,00,000	1,60,000	40,000
Bonds	1,00,000	50,000	50,000
Reserves	3,40,000	3,40,000	---
Equity shares	2,00,000	1,50,000	50,000
	8,40,000	7,00,000	1,40,000

Income statement for the period ending March 31, 2018

Particulars	Amount (₹)	Amount (₹)
Sales		10,00,000
Cost of goods sold		<u>5,00,000</u>
		5,00,000
Selling expenses	50,000	
Administrative expenses	50,000	<u>1,00,000</u>

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Operating income		4,00,000
Other charges and credits:		
Gain on sale of building and equipment	5,000	
Loss on sale of investments	(10,000)	
Interest	(6,000)	
Taxes	(1,89,000)	(2,00,000)
Net income after taxes		2,00,000

- Notes:** (i) The depreciation charged for the year ended March's, 2018 was ₹ 60,000.
(ii) The book value of the building and equipment disposed of was ₹ 10,000.
(iii) Land was sold at no profit no loss basis.

Required:

Prepare a Funds Flow Statement for the period ending March 31, 2018.

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Answer:

7. (a) Proforma Balance Sheet of the Textile Company as on

Liabilities	Amount (₹)	Assets	Amount (₹)
Net Worth	13,91,304	Fixed Assets	7,40,173
Long-Term debt	4,59,130	Cash	4,44,869
Current debt	5,84,348	Stock	6,80,851
		Sundry Debtors	<u>5,68,889</u>
	<u>24,34,782</u>		<u>24,34,782</u>

Working Notes:

1. Net worth = ₹ 32,00,000 ÷ 2.3 = ₹ 13,91,304
2. Current debt = (₹ 13,91,304/100) × 42 = ₹ 5,84,348
3. Total debt = (₹ 13,91,304/100) × 75 = ₹ 10,43,478
4. Long-term debt = ₹ 10,43,478 – ₹ 5,84,348 = ₹ 4,59,130
5. Fixed assets = (₹ 13,91,304/1,000) × 532 = ₹ 7,40,173
6. Current assets = ₹ 5,84,348 × 2.9 = ₹ 16,94,609
7. Inventory = ₹ 32,00,000 ÷ 4.7 = ₹ 6,80,851
8. Cash = ₹ 16,94,609 - (₹ 6,80,851 + ₹ 5,68,889) = ₹ 4,44,869

- (b) Fund Flow Statement of INDO Growth Ltd. for the period ending March 31, 2018

Sources of Funds

Funds from business operations:	₹	₹
Net Income after taxes	2,00,000	
Add: Depreciation	60,000	
Interest	6,000	
Loss on sale of investments	10,000	
Less: Gain on sale of building and equipment	(5,000)	2,71,000
Issuance of long-term liabilities:		
Equity Shares	50,000	
Bonds	50,000	1,00,000
Sale of Non-current assets:		
Investments (₹ 50,000 – ₹ 10,000)	40,000	
Land (₹ 50,000 – ₹ 40,000)	10,000	
Building and equipment (₹ 10,000 + ₹ 5,000)	15,000	65,000
Total		4,36,000

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Application of Funds

	₹	₹
Purchase of non-current assets:		
Building and equipment		1,30,000
Recurring payment to investors:		
Interest on bonds	6,000	
Dividend to equity shareholders	2,00,000	2,06,000
Net increase in working capital (sources – uses)		1,00,000
Total		4,36,000

Working Notes:

1. Accumulated Depreciation Account

Particulars	Amount (₹)	Particulars	Amount (₹)
To Building and equipment (Depreciation on sales of building and equipment)	20,000	By Balance b/d	1,60,000
To Balance c/d	2,00,000	By P&L A/c (depreciation of the year 2018)	60,000
	2,20,000		2,20,000

2. Building and equipment Account

Particulars	Amount (₹)	Particulars	Amount (₹)
To Balance b/d	4,00,000	By Cash	15,000
To P&L A/c	5,000	By Accumulated depreciation	20,000
To Cash (Purchase)	1,30,000	By Balance c/d	5,00,000
	5,35,000		5,35,000

3. Reserves Account

Particulars	Amount (₹)	Particulars	Amount (₹)
To Dividends Paid (Bal. Fig.)	2,00,000	By Balance c/d	3,40,000
To Balance c/d	3,40,000	By Profit of the year 2018	2,00,000
	5,40,000		5,40,000

8. (a) The management of CAMELLIA LTD. has called for a statement showing the working capital needed to finance a level of activity of 3,00,000 units of output for the year ended March 31, 2018. The cost structure for the company's product, for the above mentioned activity level, is detailed below:

	Cost per unit (₹)
Raw materials	20
Direct labour	5
Overheads	15
Total cost	40
Profit	10
Selling price	50

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

Required:

Prepare a statement of Working Capital determination.

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

Earning per share	₹ 6
Rate of Return on Investment	20%
Rate of return required by share holders	16%

Required:

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

Answer:

8. (a) Statement of Determine Net working Capital of Camellia Ltd.

	₹	₹
(A) Current Assets		
(i) Raw materials (25,000 units × 2 × ₹ 20)		10,00,000
(ii) Work in process		
Raw Materials (12,500 units × ₹ 10)	1,25,000	
Direct Labour (12,500 units × ₹ 2.5)	31,250	
Overhead (12,500 units × ₹ 7.5)	93,750	2,50,000
(iii) Finished Goods (25,000 units × ₹ 40)		10,00,000
(iv) Debtors (3,00,000 × ₹ 40 × 2)/12		20,00,000
(v) Minimum Cash Balance		25,000
Total		42,75,000
(B) Current Liabilities		
(i) Creditors for 1 month (3,00,000 × ₹ 20 × 1)/12		5,00,000
(C) Net Working Capital (NWC) (A-B)		37,75,000

Alternatively, in work-in-process [Item A(iii) above] Raw Materials may be valued at 12,500 units × Rs. 20 = Rs. 2,50,000. Debtors [item A(iv) above] may also be valued at [3,00,000 × Rs. 50 (selling price) × 2] / 12 = Rs. 25,00,000.

Calculation of Net Working Capital will change accordingly.

(b) Let, the dividend pay-out ratio be X and so the share price will be:

$$P = \frac{D}{K_e} + \frac{r(E-D)}{K_e}$$

Here D = 6x; E = ₹ 6; r = 0.20 and $K_e = 0.16$ and P = ₹ 44

Hence ₹ 44 = $\frac{6x}{0.16} + \frac{0.2(6-6x)}{0.16 \times 0.16}$

$$\begin{aligned} \text{Or } ₹ 44 &= 37.50x + 46.875(1-x) \\ \text{Or, } 9.375x &= 2.875 \\ X &= 0.3066 \text{ i.e. } 0.31 \end{aligned}$$

So, the required dividend payout ratio will be = 31%.

9. (a) The CMD Ltd. has the following specific cost of capital along with the indicated book and market value weights:

Type of Capital	Cost	Book value weights	Market value weights
Equity	0.18	0.50	0.58
Preference shares	0.15	0.20	0.17
Long-term debt	0.07	0.30	0.25
		1.00	1.00

Required:

- (i) Calculate the weighted cost of capital, using book and market value weights.
- (ii) Calculate the weighted average cost of capital, using marginal weights, if the company intends to raise the needed funds using 50 per cent long-term debt, 35

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per cent preference shares and 15 per cent retained earnings.

Note: Ignore Taxation

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(b) ANURAG MILLS LTD. has number of machines that were used to make a product that the firm has phased out of its operations. An existing machine was originally purchased six years ago for ₹ 5,00,000 and is being depreciated by the straight line method; its remaining useful life is 4 years. No salvage value is expected at the end of the useful life. It can currently be sold for ₹1,50,000. The machine can also be modified to produce another product at a cost of ₹2,00,000. The modifications would not affect the useful life, or salvage value, and would be depreciated using the straight line method.

If the firm does not modify the existing machine, it will have to buy a new machine at a cost of ₹ 4,40,000, (no salvage value) and the new machine would be depreciated over 4 years. The engineers estimate that the cash operating costs with the new machine would be ₹ 25,000 per year less than with the existing machine. Cost of capital is 15 per cent and corporate tax rate is 35 per cent.

Advise the company whether the new machine should be bought, or the old equipment modified. Assume straight line method of depreciation for tax purposes and loss on sale of existing machine can be claimed as short-term capital loss in the current year itself.

[Given: PVIFA (15% 4 years) = 2.855]

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Answer:

9. (a) (i) K_0 based on book value (BV) weights and market value (MV) weights

Sources of Capital	Weights		Cost	Total Cost	
	BV	MV		(BV × K)	(MV × K)
Equity Funds	0.50	0.58	0.18	0.090	0.1044
Preference Shares	0.20	0.17	0.15	0.030	0.0255
Long-term debt	0.30	0.25	0.07	0.021	0.0175
				0.141	0.1474

K_0 based on BV weights – 14.1 per cent.

K_0 based on MV weights – 14.7 per cent.

(ii) K_0 using marginal weights

Sources of Capital	Weights (W)	Cost (K)	Total Cost (W × K)
Long-term Debt	0.50	0.07	0.0350
Preference Shares	0.35	0.15	0.0525
Retained Earnings	0.15	0.18	0.0270
			0.1145

$K_0 = 11.45$ per cent.

(b) Cash Outflows:

Particulars	₹
Price of new machine	4,40,000
Less: Sale proceeds of existing machine	1,50,000
Less: Tax savings on loss of the sale of existing machine [0.35 × (₹ 2,00,000, Book Value – ₹ 1,50,000, Sale Value)]	17,500
Less: Modifications avoided if the new machine is bought	2,00,000
Net Cash Outflows	72,500

Cash Inflows (annual savings):

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Particulars	Amount Before Tax (₹)	Amount After Tax (₹)
Cost savings	25,000	16,250
Differential depreciation (1,10,000 – 1,00,000)	10,000	3,500
Total Cash advantage per year		19,750
(x) PV Factor		(x) 2.855
PF of future savings from buying new machine		56,386
Cash flow required		72,500
Negative PV favouring modifying machine		(16,114)

Recommendation: The old machine should be modified.

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

4×3=12

- Debtors Turnover Ratio
- Determinants of Working Capital
- Advantages of Ratio Analysis (any four)
- Differences between Fund Flow Statement and Cash Flow Statement

Answer:

10. (a) Debtors Turnover Ratio (DTR)

This ratio 'DTR' indicates the speed at which the debtors are converted into cash. It is also called as 'Receivables Turnover Ratio'.

$DTR = \text{Credit Sales in a year} / \text{Average Account Receivable}$

The term, average account receivable includes trade debtors and bills receivable.

Average accounts receivables are computed by taking the average receivables in the beginning and at the end of the accounting year.

The optimum ratio is dependent on the credit policy of the firm and credit period allowed to the customers. A lower ratio indicates poor collection from the debtors. The higher the ratio, better it is.

Sometimes, we have to calculate the average collection period of debtors. In such a case, the formula would be;

$\text{Average Collection Period} = \text{Days in a year} / DTR$

Or $\text{Average Collection Period} = (\text{Debtors} \times \text{Days in a year}) / \text{Credit Sales in a year}$.

i.e., Debtors/Credit Sales per day.

Significance of DTR:

DTR or Debt Collection Period measures the quality of debtors since it indicates the speed with which money is collected from the debtor. A shorter collection period implies prompt payment by debtors. A longer collection period implies too liberal and inefficient credit collection performance. The credit policy should neither be too liberal nor too restrictive. The former will result in more blockage of funds and bad debts while the latter will cause lower sales which will reduce profits.

(b) Determinants of Working Capital:

The size or magnitude and amount of working capital will not be uniform for all organizations and will differ from one organization to another.

The following are some factors that would determine the size of Working Capital:

- Nature and size of the Business
- Production Policies of the concern
- Process of manufacturing
- Growth and expansion of business
- Fluctuations in the trade cycle

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- Dividend Policy
- Operating Efficiency
- Other Factors like Market facilities, tax considerations, Locational Factors, Labour availability, etc.,

(c) Advantages of Ratio Analysis:

Ratio Analysis is useful and very relevant in assessing the performance of a firm in respect of the following purposes:

- Ratio analysis is the process of determining and interpreting numerical relationships based mainly on the financial statements
- To measure the liquidity position, i.e., whether the firm will be able to meet its current obligations when they become due or not.
- To know the solvency position for assessing the long-term financial liability of the firm
- Operating efficiency or turnover of the firm
- To assess the profitability position of the firm, in respect of sales and the investments
- For Inter-firm and Intra-firm comparison, to assess the relative position of the firm vis-a-vis its competitors.
- For Trend Analysis, for ascertaining whether the financial position of a firm is improving or deteriorating over the years
- Commercial Bankers and Trade Creditors are most interested in ratios like Current Ratio, Acid Test Ratio, Turnover of Receivables, Inventory Turnover, Coverage of interest by level of earnings, etc..

(d) Differences between Funds Flow Statement and Cash Flow Statement.

The following are the main differences between a Fund Flow Statement and a Cash Flow Statement:

Fund Flow Statement (FFS)	Cash Flow Statement (CFS)
1. FFS reveals the change in Working Capital between two Balance Sheet dates	CFS reveals the changes in Cash Position between two Balance Sheet dates
2. FFS is based on accounting	CFS is based on cash basis of accounting
3. In the case of FFS, a schedule of changes in Working Capital is prepared	No such schedule of changes in Working Capital is prepared for a CFS
4. FFS is useful in planning Intermediate and Long term financing	CFS, as a tool of financial analysis is more useful for Short-term analysis and Cash Planning