Paper 8 – Cost Accounting & Financial Management

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Time Allowed: 3 Hours **Full Marks: 100**

Section-A:
Answer Question No 1 which is compulsory carries 25 Marks

1. Answer the following questions:

(A) Each Question carries 2 Marks **[5x 2 = 10]**

(i) A firm earns a contribution of ₹ 4,80,000. Its operating leverage and financial leverage are respectively 4 and 5. Find the firm's PAT if the effective tax rate is 25%.

(ii) Discuss the conditions when supplementary rates are used.

(iii) In a workshop the normal working hours is 8 hours for which ₹450 is paid as wages. However, calculation of wages payable is made on piece rate basis that 30 pieces will be produced per hour. When a worker produces below standard, 90% of the piece rate is paid but when he produces above standard, 110% of piece rate is paid. On a particular day, a worker produces 260 pieces in the allotted time of 8 hours. What will be his earning?

(iv) What is the basis for cost classification as per Cost Accounting Standard 1?

(v) What is the acceptance rule for a project under the internal rate of return parameter?

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

[5 x 1 = 5]

(i) CAS-10 stands for "Overhead".

(ii) Fixed cost per unit remains constant irrespective of the number of units of output.

(iii) Material return note is a document which records the return of unused material.

(iv) IRR and NPV always give the same profitability ranking.

(v) Fund flow statement shows the sources and application of fund.

(C) Fill in the Blanks **[5x 1 = 5]**

(i) _____is discount allowed to the bulk purchaser.

(ii) Ideal time arises only whn workers are paid on _____ basis.

(iii) In _____ costing fixed cost is added to inventory.

(iv) The ideal fixed assets ratio is _____.

(v) Profitability index is also known as _____ ratio.

(D) Match the Following **[5x 1 = 5]**

Column I	**Column II**
1. Apportionment of Overheads	A. Cash Flow Statement
2. Organisation has to be both	B. Capital Structure theory
3. Cash and cash equivalent	C. Capital Budgeting
4. Modigalani and Miller method	D. Effective and efficient
5. NPV method	E. Reciprocal Method

Answer:1.(A)

(i) Combined Leverage = Operating Leverage × Financial Leverage = 4×5 = 20 Combined leverage = Contribution/ EBT EBT = Contribution/Combined Leverage = ₹ 4,80,000/20 = ₹ 24,000
PAT = EBT × (1 – Tax rate) = 24,000 × (1 – 0.25) = ₹ 18,000.

(ii) When the amount of under absorbed and over absorbed overhead is significant or large, because of differences due to wrong estimation, then the cost of product needs to be adjusted by using supplementary rates (under and over absorption/ actual overhead) to avoid misleading impression.

(iii) Normal price rate = 450/240 = 1.875.

Standard Production= 8hrs x 30 pieces = 240 pieces
260 pieces in 8 hours is above standard of 240 pieces.
Hence, wages = 110 % x 1.875 x 260 = 536.25 or 536.

(iv) As per Cost Accounting Standard 1 (CAS- 1), the basis for cost classification is as follows:

- Nature of expenses,
- Relation to Object –Traceability,
- Functions / Activities
- Behaviour – Fixed, Semi- Variable or Variable,
- Management decision making,
- Production Process,
- Time Period

(v) If IRR of the project 'r' is > K, the cost of capital, accept the project. If r < K, reject the project; If r = K, indifference point, I.e. accept or reject.

Answer:1.(B)

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

Answer:1.(C)

(i) Quantity Discount
(ii) Time
(iii) Absorption
(iv) 0.67
(v) Benefit Cost Ratio.

Answer:1.(D)

(i) E
(ii) D
(iii) A
(iv) B
(v) C

Section-B

Answer any three Questions from Q. No 2, 3, 4 and 5. Each Question carries 15 Marks

2(A) The Managing Director of All Found Limited is very much perturbed to see that labour turnover is increasing every year. Before taking an appropriate action, he desires to know the profit foregone on account of labour turnover. You are required to calculate the profit foregone on account of labour turnover from the following:

All Found Ltd.

Income Statement for the year ended 31.3-2017

Particulars	₹	₹
Sales		2,00,000
Variable Cost:		
Material	50,000	
Direct Labour	40,000	
Variable Overhead	40,000	1,30,000
Contribution		70,000
Less: Fixed Overhead		20,000
Profit before tax		50,000

The direct labour hours worked in the concern during the period were 20,300 of which 500 hours pertained to the new workers on training. Only 40% of the trainees time was productive. As replacement for the worker left was delayed for some time, 600 productive hours were lost. The direct costs incurred by the Company as a consequence of labour separation and replacement were as follows:
Separation costs – ₹ 2,000; Selection costs –₹ 3,000 and Training costs – ₹ 5,000. **[8]**

(B) The following information relates to the activities of production Dept. M of MTH Ltd. for Sept 2017:

Materials Consumed: ₹ 3,83,000; Direct labour: ₹ 5,74,000; Factory overhead chargeable to Dept. M: ₹ 2,75,760; Labour hours worked: 18,384 hours; Machine hours: 3064 hours;

One job order carried out in Dept. M has the following details:

Material Consumed: ₹ 11,000; Direct Labour Cost = ₹ 19,000; Direct labour hours: 540 hours;

Machine hours worked: 85 hours. Find the amount of factory overheads for the job under the following methods of overhead absorption: % of direct material cost, % of direct labour cost, % of prime cost, direct labour hour rate and machine hour rate. **[7]**

Answer:2.A.

Direct labour hours worked	20,300
Less: unproductive time of new workers (500 hrs. × 60%)	300
Productive hours	20,000

Lost labour hours 600 (Replacement) + 300 (Training) = 900 Unit sales per Productive Labour Hours ₹ 2,00,000 ÷ 20,000 = ₹ 10

(i)	Loss of potential sales 900 hrs. × ₹ 10	₹ 9,000
	Direct labour cost per hour worked = ₹40,000 ÷ 20,300	1.97
(ii)	Increase in direct labour cost of lost hours due to replacement = 600 × 1.97 (300 hours already included while calculating the hourly rate)	1,182
(iii)	Increase in material and variable overhead due to increase in potential sales = (90,000 ÷ 2,00,000) × 9,000	4,050
	Total increase in cost (ii + iii)	5,232
	Contribution foregone (i – iii)	3,768
	Add: Separation, selection and training costs	10,000
	Profit foregone due to labour turnover	13,768

Answer:2.B.

Parameters for overhead absorption	Total Cost for Dept	Departmental overhead as % of cost element	Job order Cost	Overhead to Job order at Dept %
Material	3,83,000	275760/383000 = 72%	11000	7920
Direct Labour	5,74,000	2,75,760/ 574500 = 48%	19000	9120
Prime Cost	9,57,500	275760/957500 = 28.82%	30,000	8646
Machine Hours = 3064; Deptal m/c hr rate = 275760/3064 = 90 ₹/hr				
M/c hour rate for job x m/c hrs for job = 85 x 90 =				7650
Direct labour hour rate for dept = 275760/18384 = 15 ₹/hr				
Direct labour hour rate for job = 540 x 15 =				8100

3(A) What is imputed cost? Give an example of imputed cost. Explain its position in a product cost sheet and in the decision making evaluation process. **[5]**

3(B) From the records of an oil distributing company, the following summarized information is available for the month of March 2017:

Sales for the month: ₹19,25,000

Opening Stock as on 1-3-17: 1,25,000 liters @ ₹ 6.50/liter.

Purchases (including freight and insurance):

March 5 1,50,000 litres @ ₹ 7.10/litre

March 27 1,00,000 litres @ ₹ 7.00/litre

Closing stock as on 31 -3-17: 1,30,000 liters

General Administration expenses for the month: ₹ 45,000

On the basis of the above information, work out the following using FIFO and LIFO methods of inventory valuation assuming pricing of issues is being done at the end of the month after all receipts during the month:

(i) Value of closing stock as on 31-3-17

(ii) Cost of goods sold during March '2017

(iii) Profit or loss for March '2017. **[10]**

Answer:3.A.

Imputed costs are hypothetical or notional costs, not involving cash outlay, computed only for the purpose of decision making. CAS specifically provide for exclusion of imputed cost from the cost sheet in every form material, labour and overhead. Imputed costs are like opportunity costs. E.g. interest on funds generated internally. When alternative capital investment proposals are evaluated, imputed cost of capital from internal funds is used for decision making.

Answer:3.B.

(i) Valuation of closing stock as on 31-03-2017

A. FIFO Method, (the closing stock will comprise the items purchased in the end)

1,00,000 Litre`s purchased on 27-3-17 @ ₹ 7.00	₹7,00,000
30,000 Litres from purchases made on 5-3-17 @ ₹ 7.10	2,13,000
1,30,000 Value of closing stock under FIFO method	9,13,000

B. LIFO method: (The closing stock will comprise the items lying in opening stock and purchased in the beginning)

1,25,000 Litres from opening stock @₹6.50	8,12,500
5,000 Litres from purchases made on 5-3-17 @ ₹ 7.10	35,500
1,30,000 Value of closing stock under LIFO method	8,48,000

(ii) .

Cost of Goods Sold	FIFO Method	LIFO Method
Opening stock as on 1-03-2017	₹8,12,500	₹8,12,500
Purchases made on 5th March	10,65,000	10,65,000
Purchases made on 27th March	7,00,000	7,00,000
Total	25,77,500	25,77,500
Less Closing stock as per (a)	9,13,000	8,48,000
Cost of material consumed	16,64,500	17,29,500
Add general Administration Expenses	45,000	45,000
Cost of goods sold	17,09,500	17,74,500

(iii) .

Profits	FIFO Method	LIFO Method
Cost of goods sold	₹ 17,09,500	₹ 17,74,500

Sales	19,25,000	19,25,000
Profit	2,15,500	1,50,500

4(A) Following data is available relating to a company for a certain month:

Particulars	Territories		
	I	II	III
Selling expenses	₹ 7,600	₹ 4,200	₹ 6,240
Distribution costs	₹ 4,000	₹ 1,800	₹ 2,000
No. of units sold	16,000	6,000	10,000
Sales	76,000	28,000	52,000

The company adopts sales basis and quantity basis of application of selling and distribution costs respectively. Compute

(i) the territory-wise overhead recovery rates separately for selling and distribution costs and

(ii) the amounts of selling and distribution costs chargeable to a consignment of 2,000 units of a product, sold in each territory at ₹ 4.50 per unit. **[4+4]**

4(B) The following details have been obtained from the cost records of Pankaj Limited:

	₹
Stock of raw materials on 1st Sept. 2017	75,500
Stock of raw materials on 30th Sept. 2017	91,500
Direct Wages	52,500
Indirect wages	2,750
Sales	2,11,000
Work-in-progress on 1st Sept. 2017	28,000
Work-in-progress on 30th Sept. 2017	35,000
Purchase of raw materials	66,000
Factory rent rates and power	15,000
Depreciation of plant and machinery	3,500
Expenses on purchases	1,500
Carriage outwards	2,500
Advertising	3,500
Office rent and taxes	2,500
Travelers wages and commission	6,500
Stock of finished goods on 1st Sept. 2017	54,000
Stock of finished goods on 30th Sept. 2017	31,000

Prepare a Cost Sheet giving the maximum possible break up of costs and profits. **[8]**

Answer:4.A

(I) It is required to find out the territory-wise overhead recovery rates separately for selling cost and distribution cost.

	Basis
Selling Cost	Sales Value
For Distribution Cost	Quantity

Note: Weight is a more appropriate basis for distribution cost. It is presumed that weight of each product sold in all the three territories is the same.

Therefore, overhead recovery rate formula:

Selling Cost Recovery Rate = (Selling expense ÷ Sales) × 100

Distribution Cost Recovery Rate = Distribution cost ÷ No. of units sold

Territory	Selling Cost recovery rate	Distribution cost recovery rate
I	7,600 / 76,000 × 100 or 10% of Sales	4,000 /16,000 or ₹ 0.25 p.u.
II	4,200 /28,000 × 100 or 15% of Sales	1,800 /6,000 or ₹ 0.30 p.u.
III	6,240 /52,000 × 100 or 12% of Sales	2,000 /10,000 or ₹ 0.20 p.u.

(II) Computation of amounts of Selling and Distribution Costs chargeable to consignment.

Territory	I	II	III
No. of units sold	2,000	2,000	2,000
Sales @ ` 4.50 p.u.	` 9,000	` 9,000	` 9,000
Selling cost chargeable	900	1,350	1,080
Distribution Cost chargeable	500	600	400
Total Selling & Distribution Costs	1,400	1,950	1,480

Answer:4.B Cost Sheet

Particulars	Amount (₹)
Opening stock of Raw Material	75,500
Add: Purchase of Raw Materials	66,000
Add: Expenses on purchases	1,500
Less: Closing Stock of raw Material	(91,500)
Raw Material Consumed	51,500

Add: Direct Wages	52,500
Prime Cost	1,04,000
Add: Factory Overheads	
Indirect Wages	2,750
Factory rent, rates & power	15,000
Depreciation on Plant & Machinery	3,500
Gross Factory Cost	1,25,250
Add: Opening stock of work-in-progress	28,000
Less: Closing Stock of work-in-progress	(35,000)
Net factory cost	1,18,250
Add: Office & Administration overheads Office rent & taxes	2,500
Cost of Production	1,20,750
Add: Opening Stock of finished goods	54,000
Less: Closing stock of finished goods	(31,000)
Cost of goods sold	1,43,750
Add: Selling & Distribution Overheads:	
Carriage outwards	2,500
Advertising	3,500
Traveler's wages & Commission	6,500
Cost of sales	1,56,250
Profit	54,750
Sales	2,11,000

5.(A) Distinguish between "Incentives to indirect workers" and "Indirect incentives to direct workers".

[7]

5.(B) Distinguish between Financial Accounting and Cost Accounting

[8]

Answer:5.(A)

Incentive schemes for workers are made to motivate workers for increasing output and quality production, saving time, reducing labour turnover and building sense of belonging. Obviously, these schemes focus on performance of workers. While performance of direct workers is easy to measure, that of auxiliary or indirect staff is not. Accordingly, incentive schemes differ between direct workers and indirect workers. Incentive schemes for indirect workers include:

Bonus to foremen and supervisors based on output, saving in time, quality improvement, reduction in scrap, etc.

Bonus to repairs and maintenance staff for routine and repetitive jobs, based on reduction in number of complaints or breakdown.

Bonus to stores staff, based on the value of materials handled or the number of requisitions per period.

Indirect Incentives to direct workers include:

Monetary schemes like profit sharing, co-partnership, co-ownership;

Non-monetary schemes like education and training facilities, health and safety devices, facilities for sports and housing, subsidized canteen and purchase coupon, pension, creation of sick and benevolent funds, arrangement of tour programs etc.

Answer:5.(B)

The main differences between Financial and Cost Accounting are as follows:

Sl/No	Financial Accounting	Cost Accounting
a.	It provides the information about the business in a general way. i.e Profit and Loss Account , Balance Sheet of the business to owners and other outside partners.	It provides information to the management for proper planning, operation, control and decision making.
b.	It classifies records and analyses the transactions in a subjective manner, i.e according to the nature of expense.	It records the expenditure in an objective manner, i.e according to the purpose for which the costs are incurred.
c.	It lays emphasis on recording aspect without attaching any importance to control.	It provides a detailed system of control for materials, labour and overhead costs with the help of standard costing and budgetary control.
d.	It reports operating results and financial position usually at the end of the year.	It gives information through cost reports to management as and when desired.
e.	Financial Accounts are accounts of the whole business. They are independent in nature.	Cost Accounting is only a part of the financial accounts and discloses profit or loss of each product, job or service.
f.	Financial Accounts records all the commercial transactions of the business and include all expenses i.e Manufacturing, Office, Selling etc.	Cost Accounting relates to transactions connected with Manufacturing of goods and services, means expenses which enter into production.
g.	Financial Accounts are concerned with external transactions i.e transactions between business concern and third party.	Cost Accounts are concerned with internal transactions, which do not involve any cash payment or receipt.
h.	Only transactions which can be measured in	Non-Monetary information like No of of

	monetary terms are recorded.	units/ hours etc are used.

Section-C

Answer any Two Questions from Q.No. 6,7, and 8. Each Question carries 15 Marks

6.(A) What are the assumptions of the Modigliani-Miller theory on capital structure and the overall cost of capital? **[7]**

6.(B) M/S Sun & Moon Co. Ltd. is considering to select one project out of two alternative projects both with life of 5 (Five) years and following particulars are given:

		Project X	Project Y
		₹	₹
Capital Investment	Year 0	2,00,000	1,00,000
Income	Year 1	60,000	50,000
	Year 2	40,000	45,000
	Year 3	40,000	30,000
	Year 4	35,000	30,000
	Year 5	40,000	20,000

The expected rate of return is 14% p.a. The present value of ₹ 1 at 14% p.a. from year 1 to 5 is as under:

Year	1	2	3	4	5
Present value factor	0.88	0.77	.68	.59	.52

You are required to calculate the comparative profitability of the two projects by using net present value method and advise the management suitably. **[8]**

Answer:6(A)

The MM Hypothesis on capital structure is:

The overall cost of capital Ko and the value of the firm are independent of the capital structure. The total market value of the firm is given by capitalizing the net operating income by the rate appropriate for the risk class, i.e. as the debt increases, the advantage is exactly off set by the increase in cost of equity, thereby maintaining the same overall cost of capital.

Assumptions:

1. The market is a perfect capital market, i.e. Investors are free to buy and sell securities Individuals can borrow funds without restriction at the same terms as firms do. Investors behave rationally and are well informed. There are no transaction costs

2. Firms can be classified into homogeneous risk classes. All firms in the same risk class will have the same degree of financial risk.

3. All firms have the same expectation of a firm's net operating income.

4. The dividend pay out ratio is 100 %, which means there is no retained earnings.

5. There is no corporate taxation. - This assumption has been removed later.

Answer:6(B) Comparative Profitability's:

Year					
	P/V Factor @14%	Annual Income (₹)	P/V (₹)	Annual Income	P/V (₹)
1	0.88	60,000	52,800	50,000	44,000
2	0.77	40,000	30,800	45,000	34,650
3	0.68	40,000	27,200	30,000	20,400
4	0.59	35,000	20,650	30,000	17,700
5	0.52	40,000	20,800	20,000	10,400
			1,52,250		1,27,150
Less:	Investment		2,00,000		1,00,000
		-Ve	47,750	+Ve	27,150

As the NPV is positive in case of Investment 'Y' the project Y may be selected.

7.(A) Sarema Company plans to manufacture and sell 400 units of a domestic appliance per month at a price of ₹600 each. The ratio of cost to selling price are as follows:

Raw materials	30%
Packing materials	10%
Direct labour	15%
Direct expense	5%

Fixed overheads are estimated at ₹ 4,32,000per annum.

The following norms are maintained for inventory management:

Raw materials	30 days
Packing materials	15 days
Direct labour	200 units
Direct expense	7 days

Other particulars are given below:

- Credit sales represent 80% of total sales and the dealer enjoys 30 working days credit.¬ Balance 20% is cash sales.
- Creditors allow 21 working days credit for payment.
- Lag in payment of overheads and an expense is 15 working days.
- Cash requirements to be 12% of net working capital.
- Working days in a year are taken as 300 for budgeting purpose.

Prepare a working capital requirement forecast for the budget year. **[10]**

7(B) Discuss the Stable Dividend Policy. Why should it be followed? **[5]**

Answer:7.(A)

Selling Price and Cost per unit

Raw materials	(₹600 × 30/100)	180
Packing materials	(₹600 × 10/100)	60
Direct labour	(₹600 × 15/100)	90
Direct expenses	(₹600 × 5/100)	30
Fixed overheads	[₹4,32,000/(400 × 12]	90
Total Cost		450
Profit		150
Selling price per unit		600

Forecast of Working Capital requirement

Current Assets:		₹
Raw materials stock	4,800 ×₹180 × 30/300)	86,400
Packing material stock	(4,800 × ₹60 × 15/300)	14,400
Work-in-progress	(4,800 × ₹285 × 7/300)	31,920
Finished goods stock	(200 × ₹450)	90,000
Debtors	(4,800 × 80/100 × ₹600 × 30/300	2,30,400
Total (A)		4,53,120
Current Liabilities:		
Creditors for raw material suppliers	(4,800 × ₹180 × 21/300)	60,480
Creditors for packing material	(4,800 × ₹60 × 21/300)	20,160
Creditors for expenses and overheads	(4,800 × ₹120 × 15/300)	28,800
Total (B)		1,09,440
Net Working capital (A – B)		3,43,680
Add: Cash required (12% of net working capital)		41,242
Total working capital required		3,84,922

Answer:.7.(B)

The term "stability of dividends" means consistency or lack of variability in the stream of dividends payments and it may be in the form of (i) constant dividend per share, (ii) constant pay-out ratio, and (iii) stable rupee dividend plus extra dividend. A policy of constant dividend per share is most suitable to concerns whose earnings are expected to remain stable over a no. of years. A policy of constant payout ratio may be supported by a firm because it is related to the firm's ability to pay dividends. The policy of constant low dividends per share plus some extra dividend in the year of high profits is suitable to the firms having fluctuating earnings from year to year.

8.(A) The following information is given to you: **[8]**

Gross Profit	₹ 1,08,000
Shareholders' funds	₹ 6,00,000
Gross Profit Margin	25%
Ratio - Credit Sales to total sales	80%
Ratio - Total Turnover to Total Assets	0.3 times
Ratio-Closing Inventory to Total Sales	1/5 times

Average debtors	20 days
Current ratio	1.5
Ratio-Long Term Debt to equity	80%
(Use 360 days per year for calculations)	

Find the following: (a) Fixed Assets turnover ratio (b) Cash/Bank Balances (c) Current Liabilities (d) Closing Inventory (e) Debtors (f) Cash Sales.

8.(B) What do you understand by "Trading on Equity"? State the limitations of Trading on Equity? **[7]**

Answer:8.(A).

Sales = 1,08,000 / 25 % = 4,32,000;
Credit sales = 80 % = 3,45,600
Cash Sales = 86,400

Debtors = 20 days = 20/360 x 3,45,600 = 19,200

Closing Inventory = 1/5 x sales = 1/ 5 x 4,32,000 = 86,400

Total Assets = sales/0.3 = 4,32,000/0.3 = 14,40,000.

Long term debt = 80 % of equity = 0.8 x 6,00,000 = 4,80,000

Total Assets = 14,40,000.

Less: Equity + Long term debt: 10,80,000

Balance = Current Liabilities 3,60,000

Current ratio = 1.5.

Hence Current assets = 1.5 x current liabilities = 1.5 x 3,60,000

Current assets = 5,40,000

Less: Debtors 19,200

Less: Inventory 86,400

Balance = Cash/Bank 4,34,400

Fixed Assets = total assets - current assets = 14,40,000 - 5,40,000 = 9,00,000

Turnover to fixed assets = 4,32,000/9,00,000 = 0.48

Answer:8.(B).

The use of long-term fixed interest bearing debt and preference share capital along with equity share capital is called Trading on Equity 'or Financial Leverage.

Trading on Equity suffers from the following limitations:

- It is a double-edged weapon.
- It is beneficial only to companies having stability in earnings, such as an electricity company;
- It increases risk and rate of interest;
- It is liable to restrictions from financial institutions.