PAPER – 8: COST ACCOUNTING & FINANCIAL MANAGEMENT

The following table lists the learning objectives and the verbs that appear in the syllabus learning aims and examination questions:

	Learning objectives	Verbs used	Definition
LEVEL B	KNOWLEDGE What you are expected to know	List	Make a list of
		State	Express, fully or clearly, the details/facts
		Define	Give the exact meaning of
	COMPREHENSION What you are expected to understand	Describe	Communicate the key features of
		Distinguish	Highlight the differences between
		Explain	Make clear or intelligible/ state the meaning or purpose of
		Identity	Recognize, establish or select after consideration
		Illustrate	Use an example to describe or explain something
	APPLICATION How you are expected to apply your knowledge	Apply	Put to practical use
		Calculate	Ascertain or reckon mathematically
		Demonstrate	Prove with certainty or exhibit by practical means
		Prepare	Make or get ready for use
		Reconcile	Make or prove consistent/ compatible
		Solve	Find an answer to
		Tabulate	Arrange in a table
	ANALYSIS How you are expected to analyse the detail of what you have learned	Analyse	Examine in detail the structure of
		Categorise	Place into a defined class or division
		Compare and contrast	Show the similarities and/or differences between
		Construct	Build up or compile
		Prioritise	Place in order of priority or sequence for action
		Produce	Create or bring into existence

Paper – 8: Cost Accounting & Financial Management

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

This paper contains 3 questions. All questions are compulsory, subject to instruction provided against each question. All workings must form part of your answer.
Assumptions, if any, must be clearly indicated.

1. Answer all questions: [2×10=20]

(a) State the method of costing that would be most suitable for
- **(i) Oil Refinery**
- **(ii) Bicycle manufacturing**
- **(iii) Interior decoration**
- **(iv) Airlines company**

(b) Monthly demand of product X – 1,500 units
Requirement of component to produce 1 unit of product X: 5 units
Ordering, receiving and handling cost ₹ 10 per order
Trucking costs: ₹5 per order
Deterioration and obsolescence cost: ₹10 per unit p.a.
Interest Rate: 15% p.a.
Storage cost: ₹4,50,000 for 90,000 units
Purchase price of a component: ₹100
Required: Calculate Economic Order Quantity.

(c) At what price per unit would Part No. A 32 be entered in the stores ledger, if the following invoice was received from a supplier?

Invoice	₹
200 units, Part No. A 32 @5	1,000
Less: 20% discount	200
	800
Add: Excise duty @ 15%	120
	920
Add: Packing charges (non-returnable boxes)	50
	970

Notes:
- **(i) A 2% discount will be given for payment in 30 days**
- **(ii) Documents substantiating payment of excess duty is enclosed for claiming CENVAT credit.**

(d) State the term FSN Analysis.

(e) A machinery was purchased from a manufacturer who claimed that his machine could produce 36.5 tons in a year consisting of 365 days. Holidays, breakdown etc, were normally allowed in the factory for 65 days. Sales were expected to be 25 tons during the year and the plant actually produced 25.2 tons during the year.
You are required to state the following figures: (i) Rated capacity (ii) Practical capacity (iii) Normal capacity and (iv) Actual capacity

(f) If the minimum stock level and average stock level of raw material "X" are 8,000 and 18,000 units respectively, find out its reorder quantity.

(g) List out the two criticism of MM Hypothesis.

(h) The ratio of Current Assets (₹9,00,000) to Current liabilities (₹6,00,000) is 1.5 :1. The accountant of this firm is interested in maintaining a current ratio of 2:1 by paying some part of current liabilities. What would be the amount of current liabilities which must be paid for this purpose?

(i) Given for a project:
Annual Cash inflow ₹80,000
Useful life 4 years
Pay - Back period 2.855 years
Calculate the cost of the project?

(j) EXCEL Ltd. projects that cash outlays of ₹37,50,000 will occur uniformly throughout the coming year. Excel plans to meet its cash requirements by periodically selling marketable securities from its portfolio. The firm's marketable securities are invested to earn 12% and the cost per transaction of converting securities to cash is ₹40.
According to Baumol, what is the optimal transaction size of marketable securities to cash?

2. Answer any three questions . [3×16=48]

(a) (i) A manufacturer uses 200 units of a component every month and he buys them entirely from an outside supplier. The order placing and receiving cost is Rs. 100 and annual carrying cost is Rs. 12. From this set of data, calculate the Economic Order Quantity. [2]

(a) (ii) P Ltd. Uses three types of materials A, B and C for production of 'X' the final product. The relevant monthly data for the components are as given below :

	A	B	C

Normal usage (units)	**200**	**150**	**180**
Minimum usage (units)	**100**	**100**	**90**
Maximum usage (units)	**300**	**250**	**270**
Reorder quantity (units)	**750**	**900**	**720**
Reorder period (months)	**2 to 3**	**3 to 4**	**2 to 3**

Calculate from each component :

I. Reorder level

II. Minimum level

III. Maximum level and

IV. Average stock level **[1 ½ x 4 = 6]**

(a) (iii) Two fitters, a labourer and a boy undertake a job on piece rate basis for Rs. 1,290. The time spent by each of them is 220 ordinary working hours. The rates of pay on time – rate basis are Rs. 1.50 per hour for each of the two fitters, Rs. 1 per hour for the labourer and Rs. 0.50 per hour for the boy. Calculate :

I. The amount of piece-work premium and the share of each worker, when the piece-work premium is divided proportionately to the wages paid.

II. The selling price of the above job on the basis of the following additional data :
Cost of direct material Rs. 2,010, works overhead at 20% of prime cost, selling overhead at 10% of works cost and profit at 25% on cost of sales. **[3+2=5]**

(a) (iv) Discuss Opportunity Cost. **[3]**

(b) (i) A manufacturer of Surat purchased three Chemicals A, B and C from Bombay. The invoice gave the following information:

	Rs.
Chemical A :	**12,600**
Chemical B:	**19,000**
Chemical C:	**9,500**
Sales Tax	**2,055**
Railway Freight	**1,000**
Total Cost	**44,155**

A shortage of 200 kg in Chemical A, of 280 kg. in Chemical B and of 100 kg. in Chemical C was noticed due to breakages. At Surat, the manufacturer paid Octroi duty @ Re 0.10 per kg. He also paid Cartage Rs. 22 for Chemical A, Rs. 63.12 for Chemical B and Rs. 31.80 for Chemical C. Calculate the stock rate that you would suggest for pricing issue of chemicals assuming a provision of 5% towards further deterioration. **[8]**

(b) (ii) The Managing Director of All Found Ltd is very much perturbed to see that labour turnover is increasing every year. Before taking a 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 31-12-2014

Sales		Rs. 2,00,000
Variable cost :	Rs.	
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 Rs. 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 – Rs. 2,000; Selection costs – Rs. 3,000 and Training costs – Rs. 5,000. [8]

(c) (i) ABC Ltd. is a manufacturing company having three production departments, 'A' 'B' and 'C' and two service departments 'X' and 'y'. The following is the budget for December 2014:

	Total	A	B	C	X	Y
	Rs	Rs.	Rs.	Rs.	Rs.	Rs.
Direct Material		1,000	2,000	4,000	2,000	1,000
Direct Wages		5,000	2,000	8,000	1,000	2,000
Factory rent	4,000					
Power	2,500					
Depreciation	1,000					
Other overheads	9,000					
Additional information						
Area(Sq.ft.)		500	250	500	250	500
Capital Value (Rs. Lacs) of assets		20	40	20	10	10
Machine hours		1,000	2,000	4,000	1,000	1,000
Horse power of machines		50	40	20	15	25

A technical assessment or the apportionment of expenses of service departments is as under:

	A	B	C	X	Y
	%	%	%	%.	%
Service Dept. 'X'	45	15	30	-	10

Service Dept. 'Y'	60	35	-	5	-

Required:

(i) A statement showing distribution of overheads to various departments.

(ii) A statement showing re-distribution of service departments expenses to production departments.

(iii) Machine hours rates of the production departments 'A', 'B' and 'C'. [4+4+2=10]

(c) (ii) Explain how under and over absorption of overheads are treated in cost accounts. [6]

(d) (i) A machine shop has 8 identical drilling machines manned by 6 operators. The machine cannot be worked without an operator wholly engaged on it. The original cost of all these machines works out to Rs. 8 lakh. These particulars are furnished for a 6 month period.

Normal available hours per month per worker	208
Absenteeism (without pay) hours P.M. per worker	18
Leave (with pay) hours per worker P.M.	20
Normal idle time Unavoidable hours per worker P.M.	10
Average rate of wages per worker for 8 hours a day	Rs.20
Average rate of production bonus estimated	15% on wages
Value of Power consumed	Rs. 8,050
Supervision and indirect Labour	Rs. 3,300
Lighting and electricity	Rs. 1,200

These particulars are for a year:

Repairs and maintenance including consumables	3% of value of machines
Insurance	Rs. 40,000
Depreciation.	10% of original cost
Other sundry works expenses	Rs. 12,000
General management expenses allocated	Rs. 54,530

You are required to work out a comprehensive machine hour rate for the machine shop. [10]

(d) (ii) The Bharat Manufacturing Company submits the following information on 31st March 2015 : [6]

Particulars	Rs.	Particulars	Rs.
Sales for the year	2,75,000	Direct labour	65,000
Inventories at the beginning of the year :		Factory overhead was 60% of the direct labour cost	
Finished goods	7,000	Inventories at the end of the year :	
Work-in-progress	4,000	Work-in-progress	6,000
Purchases of materials for the year were	1,10,000	Finished goods	8,000
Materials inventory :		Other expenses for the year :	
At the beginning of the year	3,000	Selling expenses 10% of sales	
At the end of the year	4,000	Administrative expenses % of sales	

Prepare a Statement of Cost.

3. Answer any two questions [2×16=32]

(a) (i) Complete the Balance Sheet given below with help of the following information:

Gross Profits	Rs. 40,500
Shareholders' Funds	Rs. 5,75,000
Gross Profit margin	15%
Credit sales to Total sales	60%
Total Assets turnover	0.3 times
Inventory turnover	4 times
Average collection period (a 360 days year)	20 days
Current ratio	1.35
Long-term Debt to Equity	45%

Balance Sheet

Creditors	…………………	Cash	…………………..
Long-term debt	…………………	Debtors	…………………..
Shareholders' funds	…………………	Inventory	…………………..
		Fixed assets	…………………..

[10]

(a) (ii) List the merits and demerits of the pay back period method. [3+3=6]

(b) (i) A company issues Rs. 10,00,000, 12% debentures of Rs. 100 each. The debentures are redeemable after the expiry of fixed period of 7 years. The company is in 35% tax bracket.
Required :

I. Calculate the cost of debt after tax, if debentures are issued at :
- **(i) Par**
- **(ii) 10% discount**
- **(iii) 10% premium**

II. If brokerage is paid at 2%, what will be the cost of debentures, if issues is at par ? [4]

(b) (ii) The directors of Wholesalers Ltd. Have forecast a steady rise in turnover for the coming year and have asked you to set out the implications of this on the company's cash position.

The turnover for the current year to 31st March 2014, was ₹12 crore, a steady ₹1 crore per month. It is felt that as a result of an advertising campaign in December 2008- March 2009, this would rise to ₹1.3 crore per month for the first six months of 2014-2015 and to ₹1.5 crore per month for the second six months and thereafter.

Wholesalers Ltd. Achieve a gross profit on sales of 25% and take two months credit from suppliers; 40% of customers pay in the month of purchase, 40% pay in the following month and 20% pay one month later. The Company holds stocks for forecast sales in April and plans to maintain this one month stock level. Variable overheads are usually 10% of sales and are paid in the month incurred. Fixed overheads of ₹1.5 crore are forecast for 2014-2015 which include ₹30,00,000 depreciation. Fixed overheads are paid in the month incurred. The company plans to spend ₹20,00,000 in June on additional office furniture and prefabricated warehousing.

You are required to produce a summarizes forecast of cash flow for 2014-2015 with supporting schedules. Ignore taxation. [6]

(b) (iii) Surya Industries Ltd. is marketing all its products through a network of dealers. All sales are on credit and the dealers are given one month time to settle bills. The company is thinking of changing the credit period with a view to increase its overall profits. The marketing department has prepared the following estimates for different periods of credit:

Particulars		Present Policy	Plan I	Plan II	Plan III
Credit period	(in months)	1	1.5	2	3
Sales	(₹ Lakhs)	120	130	150	180
Fixed costs	(₹ Lakhs)	30	30	35	40
Bad debts	(% of sales)	0.6	0.9	1	2

The company has a contribution/sales ratio of 40% further it requires a pre-tax return on investment at 20%. Evaluate each of the above proposals and recommend the best credit period for the company. [6]

(c) (i) Write short note on Venture Capital Financing. [4]

(c) (ii) The following information relates to nana Ltd.

Earnings of the Company	₹10, 00,000
Dividend payout ratio	60%
No. of shares outstanding	2, 00,000
Rate of Return on Investment	15%
Equity Capitalization Rate	12%

i) What would be the Market Value per Share as per Walter's Model?
ii) What is the optimum Dividend Payout Ratio according to Walter's Model, and the Market Value of Company's Share at that payout ratio? [2+2+2]

(c) (iii) Y Ltd. has ₹ 15,00,000 allocated for capital budgeting purposes. The following proposals and associated profitability indexes have been determined:

Project	Amount ₹	Profitability Index
1	4,50,000	1.22
2	2,25,000	0.95
3	5,25,000	1.20
4	6,75,000	1.18

5	**3,00,000**	**1.20**
6	**6,00,000**	**1.05**

Which of the above investments should be undertaken? Assume that projects are indivisible and there is no alternative use of the money allocated for capital budgeting. [6]