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) Using Taylor's differential piece rate system, calculate the earnings of 'X' from the following information:

Standard time per piece	= 12 minutes
Normal rate per hour (in a 8 hours day)	= ₹30
'X' produced	= 37 units

(b) State the conditions when supplementary rates are used.

(c) The annual carrying cost of material 'A' is ₹7.2 per unit and its total carrying cost is ₹18,000 per annum. Calculate the Economic Order Quantity for material 'A'. If there is no safety stock of material A.

(d) State the treatment of Unsuccessful Research and Development in Cost Accounting.

(e) Material with invoice value ₹10,000 was received in the Stores Dept. The transport cost was ₹200. Since the material leaked in transit, damage to other goods of ₹350 had to be paid to the transporter. Estimate the material cost.

(f) Bonus at 10% of salary is paid to the foreman who supervises five different production shops producing five different products. State the treatment of bonus in the Cost Accounts.

(g) The proprietor's fund is ₹45,00,000 and ratio of fixed assets to proprietor's funds is 0.75. Calculate the amount of net working capital.

(h) A project has an equity beta of 1.2 and is going to be financed by 30% debt and 70% equity. Assume debt beta = 0, R_f= 12% and R_m= 18%. What is the required rate of return?

(i) Ascertain the discounted value at 10% p.a. at the end of year 1 of an investment of ₹2,00,000 to be made at the end of year 2 and ₹3,00,000 made immediately.

(j) The following data relates to HN Ltd.

	₹
Earnings before interest and tax (EBIT)	5,00,000
Fixed Cost	10,00,000

Earnings Before Tax (EBT) 4,00,000

Calculate Combined Leverage.

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

(a)

(i) From the records of an oil distributing company, the following summarized information is available for the month of March 2015:

Sales for the month: ₹19,25,000

Opening Stock as on 1-3-15: 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 -3-15: 1,30,000 litres

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 31-3-15

(II) Cost of goods sold during March '2015

(III) Profit or loss for March '2015. [4+4+2]

(ii) 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. [4]

(iii) Calculate the direct expenses as per CAS-10 from the following information: Royalty paid on sales: ₹1,25,000; Royalty paid on production: ₹1,00,000; Design charges ₹26,000; Machine shop expenses ₹45,000; Software development charges related to production: ₹55,000. [2]

(b)

(i) 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]

(ii) The following are the maintenance costs incurred in a machine shop for six months with corresponding machine hours:

Months	Machine Hours	Maintenance Costs (₹)
January	2,000	300
February	2,200	320
March	1,700	270
April	2,400	340
May	1,800	280
June	1,900	290
Total	12,000	1,800

Analyse the maintenance cost, which is semi-variable, into fixed and variable element.

[8]

(c)

(i) 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.-12-2014

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]

(ii) Two fitters, a labourer and a boy undertake a job on piece rate basis for ₹1,290. The time spent by each of them is 220 ordinary working hours. The rates of pay on time-rate basis are ₹

1.50 per hour for each of the two fitters, ₹1 per hour for the labourer and ₹ 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 ₹ 2010, Works overhear at 20% of prime cost, Selling Overhead at 15% of Works Cost and Profit at 25% on Cost of sales. [8]

(d)

(i) The following details are available in respect of a consignment of 1,250 kgs. of materials 'X" :

A. Invoice price - ₹ 20 per kg.
B. Excise Duty - 25% of Invoice price
C. Sales Tax - 8% on Invoice price including Excise Duty
D. Trade Discount - 10% on Invoice price
E. Insurance -1% of Aggregate net price
F. Delivery charges - ₹ 250
G. Cost of containers @ ₹ 60 per container for 50 kg. of material. Rebate is allowed @ ₹ 40 per container if returned within six weeks, which is a normal feature.
H. One container load of material was rejected on inspection and not accepted.
I. Cost of unloading and handling @ 0.25% of the cost of materials ultimately accepted.

On the basis of above you are required to find out the landed cost of per kg. of material 'X". [10]

(ii) Name six factors that should be disclosed in the cost statements as per CAS-3. [6]

3. Answer any two questions [2×16=32]

(a)

(i) Calculate — (I) Stock turnover ratio, (II) Debtors' turnover ratio (in number of days) and (III) Working capital turnover ratio from the following information:

Sales (all credit): ₹ 10,00,000;
Stock: ₹ 90,000;
Debtors: ₹ 20,000;
Sundry creditors: ₹ 60,000;
Bills payable: ₹ 30,000;
Provision for taxation: ₹ 10,000;
Gross profit: ₹ 1,50,000;
Marketable securities: ₹ 40,000 ;
Cash at Bank: ₹ 20,000. [6]

(ii) A manufacturing company is planning to install either of the following two machines which are mutually exclusive. The details of their purchase price and operating costs are as given below:

	Machine I (₹)	Machine II (₹)
Purchase price including cost of installation	1,00,000	80,000
Operating costs: Year wise:		
1	20,000	25,000
2	20,000	25,000
3	20,000	25,000
4	25,000	36,000
5	25,000	36,000
6	25,000	36,000
7	30,000	---
8	30,000	---
9	30,000	---
10	30,000	---

The salvage value of the Machine I is expected to be ₹15,000 at the end of its life of 10 years, while for Machine II it is ₹10,000 at the end of the 6th year.

The cost of capital is 15%.

You can assume that technically both the Machines are equally useful.

You are required to answer the following:

I. The present value of costs for Machine I.
II. The present value of costs for Machine II.
III. The annual capital charge for Machine I.
IV. The annual capital charge for Machine II.
V. Which of the Machines is cheaper?

Given:

Year	Rate	PVFA	PVF
3	15%	2.283	0.658
4	15%	2.855	.572
6	15%	3.784	.432
10	15%	5.019	.247

[2 1/2+2 1/2+2+2+1]

(b)

(i) Explain the Stable Dividend Policy. Why should it be followed? [2+3]

(ii) The following summarizes the % changes in operating income, % changes in revenues, and betas for four firms.

Firm	Change in Revenue	Change in Operating Income	Beta
ABC Ltd.	27%	25%	1.00
DEF Ltd.	25%	32%	1.15
GHI Ltd.	23%	36%	1.30
JKL Ltd.	21%	40%	1.40

(I) Calculate the degree of operating leverage for each of these firms. Comment also
(II) Use the operating leverage to explain why these firms have different betas. [4+3]

(iii) Distinguish between financial lease and an operating lease. [4]

(c)

(i) Explain the debt-service coverage ratio. [3]

(ii) Hems Ltd. is commencing a new project for manufacture of electric toys. The following cost information has been ascertained for annual production of 60,000 units at full capacity.

	Amount per unit	Amount per unit
Raw materials		20
Direct labour		15
Manufacturing overheads:		
Variable	15	
Fixed	10	25
Selling & distribution overheads:		
Variable	3	
Fixed	1	4
Total cost		64
Profit		16
Selling price		80

In the first five year of operations expected production and sales are 40,000 units and 35,000 units respectively. To assess the need of Working Capital, the following additional information is available:

Stock of raw materials	3 months consumption
Credit allowable for debtors	$1\ ^1/_2$
Credit allowable by creditors	4 months
Lag in payment of wages	1 month
Lag in payment of overheads	0.5 month
Cash in hand and bank is expected to ₹60,000	

You are required to prepare a projected statement of working capital requirement for the first year of operations. Debtors are taken at cost. [10]

(iii) PQR Ltd. operating income (before interest and tax) is ₹11,25,000. The firm's cost of debts is 10% and currently firm employs ₹37,50,000 of debts. The overall cost of capital of firm is 12%. Calculate cost of equity. [3]