PAPER – 8: COST ACCUNTING & 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) List the objective of CAS-4.

(b) The following data is available in respect of a machine:

Cost of machine	**₹ 10,000**
Estimated scrap value	**₹ 1,000**
Working life of the machine	**6 years**

The machine is discarded because of obsolescence after 4 years of service and sold for ₹ 2,000. What is the resultant loss and how would you treat the same in Cost Accounts?

(c) X Ltd. which absorbs overheads at a pre-determined rate, provides the following information: overheads actually incurred ₹4,50,000; overhead absorbed ₹1,00,000. It was found that 60% of the unabsorbed overheads were due to defective planning. How would unabsorbed overheads due to defective planning be treated in cost accounts?

(d) Average lead time - 10 days; maximum lead time - 15 days, minimum lead time - 6 days and for emergency purchases - 4 days. Average consumption - 15 units per day and maximum consumption - 20 units per day. Calculate Danger Level.

(e) "The more kilometers you travel with your own vehicle, the cheaper it becomes." Comment briefly on this statement.

(f) Distinguish between cost allocation and cost absorption.

(g) The capital structure of a company is as under :

3,00,000 Equity Shares of ₹ 10 each,
32,000, 12% Preference Shares of ₹100 each,
General Reserve ₹15, 00,000,
Securities Premium Account ₹ 5,00,000,
25,000, 14% Fully Secured Debentures of ₹100 each,
Term Loan of ₹13,00,000.

Based on these calculate the leverage of the company.

(h) The total market value of the equity shares of ANITA LTD. is ₹ 60 lakh and the total value of debt is ₹ 40 lakh. The treasurer estimates that the beta of the stock is currently 1.5. Assume that

the beta of debt is zero. If the expected risk premium of the market is 10% and the Treasury bill rate is 8%, what will be the cost of capital of ANITA LTD.?

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

(a) [4+4=8]

(i) "A' an employee of XYZ Co. gets the following emoluments and benefits.

Salary	**₹ 250 per month**
Dearness allowance	
On 1st ₹100 of Salary	**₹400**
On next ₹100 of Salary	**₹100**
On balance every ₹100	**₹50 or part thereof**
Employers Contributions to Provident Fund	**8% of Salary and D. A.**
E. S. I.	**4% of Salary and D. A.**
Bonus	**20% of Salary and D. A**
Other Allowances	**₹2,725 per annum.**

A works for 2,400 hours per annum, out of which 400 hours are non- productive but treated as normal idle time. A worker for 18 effective hours in Job No. 15, where the cost of direct materials equals 'A's earnings and the overhead applied is 100% of Prime Cost. The sale value of the job is quoted to earn a profit of 10% on such value.

You are requested to find out:

I. Effective hourly cost of A and

II. The expected sale value of job No.15.

(ii) A cast iron foundry is importing forged steel moulds for making its castings. The moulds are of four different sizes A, B, C and D and the CIF values are US $ 4,140, 4,760, 6,340 and 7,875, respectively. Customs duty may be assumed at 45% and clearing charges 5% of CIF value. The number of castings that can be made out of each mould is: A 2,000, B 2,000, C 1,800, and D 1,500.

The weight of each casting out of A is 300 kg., B 400 kg., C 500 kg., and D 700 kg. The casting suffer a normal rejection of 10%. You are required to calculate the average cost of mould per tonne of saleable casting.

(For conversion assume US $1 = ₹ 8.) [8]

1. (b)

(i) The pipe company manufactures two products A and B during the first year of its operations. For purposes of product costing, an overhead rate of application of ₹1.70 per direct labour hour was used, based on budgetary factory overhead of ₹3,40,000 and budgeted direct labour hours of 2,00,000 as follows:

	Budgeted overhead	Budgeted Hours		Product A	Product B
Department 1	**₹ 2,40,000**	**1,00,000**	**Dept I**	**4**	**4**
Department 2	**₹ 1,00,000**	**1,00,000**	**Dept II**	**1**	**1**

3,40,000	2,00,000	5 hours	5 hours

At the end of the year, there was no work on process. There were, however, 2,000 and 6,000 finished units, respectively of products A and B on hand. Assume that budgeted activity was attained.

(I) What was the effect on the company's income of using a plant wise overhead rate instead of departmental overhead rates?

(II) Assume that material and labour costs per unit of product A were ₹ 10 and that the selling price was established by adding 40% to cover profit and selling and administrative expenses. What difference in selling price would result from the use of departmental against plant wise overhead rates?

(III) Explain why departmental overhead rates were generally preferable to plant wise rates.

[4+4+2=10]

(ii) Discuss the treatment of idle time and overtime wages in cost records. [3+3=6]

2. (c)

(i) Mr. X purchased an asset costing ₹ 50,000, and a spare part costing ₹ 4,000. This spare part is specific to the asset purchased. Also given that the life of the equipment is 4 years, whereas the life of the spare part is 5 years. State the treatment of this spare part as per CAS-6. [3]

(ii) The capacity usage ratio and the capacity utilization ratio in respect of machine for a particular month is 80% and 90% respectively. The available working hours in a month is 200 hours. The break-up of idle time is as follows:

Waiting time for job - 5 hours; breakdown - 4 hours; waiting time for tools - 3 hours. Calculate the cost and present the same in a tabular form when the hourly fixed cost of running the machine is ₹ 8.00. [5]

(iii) The annual demand for raw material R is 4,000 units and the purchase price is expected to be ₹ 90 per unit. The incremental cost of processing an order is ₹ 135 and the cost of storage is estimated to be ₹ 12 per unit.

I. What is the optimal order quantity and the total relevant cost of this order quantity?

II. Suppose that the ₹ 135 estimate of the incremental cost of processing an order is incorrect and should have been ₹ 80. Assume that all the other estimates are correct. What is the cost of this prediction error assuming that the solution to part (a) is implemented for one year?

III. Assume at the start of the period, a supplier offers 4,000 units at a price of ₹ 86. The materials will be delivered immediately and placed in the stores. Assume that the incremental cost of placing this order is zero and the original estimate of ₹ 135 for placing an order for the economic batch size is correct. Should the order be accepted? [2+4+2=8]

2. (d)

(i) In a certain factory Type A and Type B machines have been designed to produce the same product but Type A is less automatic than Type B and requires somewhat more labour to operate. Pertinent costs are as follows:

	Type A	Type B

Set up cost	₹400	₹600
Variable cost per unit	4.90	4.40

Which type of machine should be used for processing various sized orders? [6]

(ii) Meera Industries Limited is a single product organisation having a manufacturing capacity of 6,000 units per week of 48 hours. The output data vis-a-vis different elements of cost for three consecutive weeks are given below:

Units produced	Direct Material	Direct Labour	Total Factory overheads (Variable and Fixed)
2,400	₹4,800	₹6,000	₹37,200
2,800	5,600	7,000	38,400
3,600	7,200	9,000	40,800

As a Cost Accountant, you are asked by the Company management to work out the selling price assuming an activity level of 4,000 units per week and a profit of 20% on selling price. [10]

3. (Answer any two questions) [2×16=32]

(a) (i) Discuss the changing scenario of Financial Management in India. [6]

(ii) Shri Devdas asks you to prepare his Balance Sheet from the particulars furnished hereunder:

Stock velocity	6
Gross profit margin	20%
Capital turnover ratio	2
Fixed assets turnover ratio	4
Debt collection period	2 months
Creditors payment period	73 days
Gross profit	₹60,000
Excess of closing stock over opening stock was	₹5,000

Difference in balance Sheet represents bank balance. [10]

(b) (i) From the following figures, prepare a statement showing the changes in the working capital and fund flow statement during the year 2014:-

Assets	Dec.31,2013	Dec.31,2014
Fixed Assets (net) ₹	5,10,000	6,20,000
Investment	30,000	80,000
Current Assets	2,40,000	3,75,000
Discount on debentures	10,000	5,000
	7,90,000	10,80,000
Liabilities		
Equity share capital	3,00,000	3,50,000
Preference share capital	2,00,000	1,00,000

Debentures	1,00,000	2,00,000
Reserves	1,10,000	2,70,000
Provision for doubtful debts	10,000	15,000
Current liabilities	70,000	1,45,000
	7,90,000	10,80,000

You are informed that during the year:

I. A machine costing ₹70,000 book value and WDV of ₹40,000 was disposed of for ₹ 25,000.

II. Preference share redemption was carried out at a premium of 5% and

III. Dividend at 10% was paid on equity share for the year 2013.

Further:

(i) The provision for depreciation stood at ₹1,50,000 on 31.12.13 and at ₹1,90,000 on 31.12.14; and

(ii) Stock which was valued at ₹90,000 as on 31.12.13; was written up to its cost, ₹ 1,00,000 for preparing Profit and Loss account for the year 2014. [4+4=8]

(ii) A Company provide the following data:

	Cost per unit (₹)
Raw materials	52.00
Direct labour	19.50
Overheads	39.00
Total cost	110.50
Profit	19.50
Selling price	130.00

The following additional information is available:-

1) Average raw materials in stock: one month.
2) Average materials in process: half-a-month
3) Average finished goods in stock: one month
4) Credit allowed by suppliers: one month
5) Credit allowed to debtors: two month
6) Time lag in payment of wages: one and a half weeks.
7) Overheads: one month
8) One-fourth of sales are on cash basis.
9) Cash balance is expected to be ₹1,30,000

You are required to prepare a statement showing the working capital needed to finance a level of activity of 70,000 units of annual output. The production is carried throughout the year on even basis and wages and overheads accrue similarly. (Calculation is made on the basis of 30 days a month and 52 weeks a year.) [8]

(c) (i) What are the criticisms of capital Assets Pricing Model (CAPM)? [4]

(ii) XYZ Limited wishes to raise additional finance of ₹10 lacs for meeting its investment plans. It has ₹2,10,000 in the form of retained earnings available for investment purposes. The following are the further details:

1) Debt/ equity mix 30%/70%
2) Cost of debt upto ₹1,80,000 - 10% (before tax) beyond ₹ 1,80,000 - 16% (before tax)

3) **Earning per share ₹4**
4) **Dividend payout 50% of earnings**
5) **Expected growth rate in dividend 10%**
6) **Current market price per share ₹ 40**
7) **Tax rate 50%**

You are required to:

I. **Determine the pattern for raising the additional finance.**
II. **Determine the post-tax average cost of additional debt.**
III. **Determine the cost of retained earnings and cost of equity , and**
IV. **Compute the overall weighted average after tax cost of additional finance.**

[2+2+2+3=9]

(iii) What are the assumptions of Walter Model? [3]