Paper 10 – Cost & Management Accountancy

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 – 10: Cost & Management Accountancy

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

QUESTION 1, which is compulsory.
Section-A has three questions, Attempt any two.
Section-B has three questions, Attempt any two.
Section-C has four questions, Attempt any three.
(Working Notes should form part of the answer.)

1. Answer all questions.

(i) From the following particulars, write up Contract Account and find out the value of tender (contract) price: Materials use ₹ 30,000; Productive wages ₹ 25,000; Direct expenses ₹ 500; Provide 60% on productive wage for works overhead and 12 ½ % on works cost for office overhead. Profit to be realized 15% on the tender price. [3]

(ii) A company prepares a budget for a production of 2,00,000 units. Variable cost per unit is ₹ 15 and the fixed cost is ₹ 2 per unit. The company fixes its selling price to fetch a profit of 10% on cost.
What is the break-even point ? (both in units and ₹) [3]

(iii) The budgeted working conditions for a cost centre are as follows :

Normal working per week	42 hours
Number of machines	14
Normal weekly loss of hours on maintenance	5 hours per machine
Number of weeks works per year	48
Estimated annual overheads	₹ 1,24,320
Actual result in respect of a 4 week period are :	
Overhead incurred	₹ 10,200
Machine hours produced	2,000

On the basis of the above information you are required to calculate :
(a) The machine hour rate
(b) The amount of under or over-absorption of overhead (2+2=4)

(iv) Whether each and every transactions with Related Parties is to be disclosed under Para D-5 of Annexure to the Cost Audit Report? [2]

(v) Distinguish between Cost Accounting policy and Cost Accounting system? [2]

(vi) A firm faces the demand curve q = 200- 100p. If the objective of the firm is to maximize total revenue, what is the output level. [4]

SECTION A

Answer any two questions from this section.

2. (a) (i)

Leo Limited undertakes to supply 1,000 units of a component per month for the months of January, February and March 2015. Every month a batch order is opened against which materials and labour cost are booked at actuals. Overheads are levied at a rate per labour hour. The selling price is contracted at ₹ 15 per unit.

From the following data, present the cost and profit per unit of each batch order and the overall position of the order for the 3000 units:

Month	Batch Output (Numbers)	Material Cost	Labour Cost	Overheads	Total Labour Hours
January	1,250	₹ 6,250	₹ 2,500	₹ 12,000	4,000
February	1,500	9,000	3,000	9,000	4,500
March	1,000	5,000	2,000	5,000	5,000

Labour is paid at the rate of ₹ 2 per hour. [3+3+2=8]

2. (a) (ii)

XYZ Ltd. is selling three brands of its products in the brand names X, Y and Z. The details, regarding unit cost and selling prices are as under:

	X	Y	Z
Direct Materials	₹ 6	₹ 12	₹ 16
Direct labour	8	8	20
Variable Overhead	6	20	14
Selling Price	36	50	96

The monthly fixed expenditure is ₹ 5,40,000. Sales volume for the months of July and August of 2014 are as follows:

	X	Y	Z
July	20,000	20,000	20,000
August	40,000	26,000	10,000

Find out the monthly profits and if your computation brings out that higher profit was earned in the month having lower sales volumes, kindly justify the finding with reasons. 8

2.(a) (iii)

Describe the steps that need to be undertaken for making reporting of variances more effective. [4]

2. (b) (i)

A contractor commenced work on a particular contract on 1st April 2014. He closes the books of accounts for the year on 31st December of each year. The following information is revealed from his costing records on 31st December, 2014:

Materials sent to site ₹ 43,000 Foreman 12,620 Labour 1,00,220

A machine costing ₹ 30,000 remained in use on site for 1/5th of the year. Its working life was estimated at 5 year and scrap value at ₹ 2,000.

A supervisor is paid ₹ 2,000 per month and had devoted half of his time on contract.

All other expenses were ₹ 14,000. The materials on site were ₹ 2,500. The contract price was ₹ 4,00,000. On 31st December, 2014, 2/3rd of the contract was completed, however, the architect gave certificate only for ₹ 2,00,000 on which 80% was paid. Prepare contract account. [8+2=10]

2. (b) (ii)

The following set of information is presented to you by your client AB Ltd. producing two products X and Y:

		X	Y
1.	Direct material per unit	₹ 20	₹ 18
2.	Direct wages (per unit)	6	4
3.	Fixed overhead during the period is expected to be ₹ 1,600		
4.	Variable overhead is allocated to products at the rate of 100% of direct wages.		
5.	Sales price per unit (₹)	40	30
6.	Proposed sales mix:		
	(i) 100 units of X and 200 units of Y		
	(ii) 150 units of X and 150 units of Y		
	(iii) 200 units of X and 100 units of Y		

As a Cost Accountant you are requested to present to the management of AB Ltd. the following:

I. **The unit marginal cost and unit contribution.**
II. **The total contribution and the resultant profit from each of the above sales mixes.**
III. **The proposed sales mixes to earn a profit of ₹ 300 and ₹ 600 with the total sales of X and Y being 300 units. [2+2+6=10]**

2. (c) (i)

Given below is the Trading and Profit and Loss Account of Vikas Electronics for the accounting year ended 31st March, 2015.

Particulars	Amount (₹)	Particulars	Amount (₹)
To Direct materials consumed	3,00,000	By Sales: 2,50,000 units	7,50,000
To Direct wages	2,00,000		
To Factory expenses	1,20,000		
To Office expenses	40,000		
To Selling and distribution expenses	80,000		
To Net profit	10,000		
	7,50,000		7,50,000

Normal output of the factory is 2,00,000 units. Factory overheads are fixed upto ₹ 60,000 and office expenses are fixed for all practical purposes. Selling and distribution expenses are fixed to the extent of ₹ 50,000; the rest are variable.

Prepare a statement reconciling profit as per Cost Accounts and Financial Accounts. 8

2. (c) (ii)

ABC Ltd. makes two types of polish-one for floors and one for cars. It sells both types to industrial users only, in one liter containers. The specifications for the two products per patch of 100 liters are:

Materials	Floor Polish	Car Polish
Delta	120 liters	100 liters
Gamma	20 kg	10 kg
Containers – Cost per 100	₹ 100	₹ 100
Direct labour		
Manufacturing	12 man-hours	16 man-hours
Primary Packing	5 man-hours	5 man-hours

During the six months to end of 30th September, the company expects to sell 15,000 1itres of floor polish at ₹ 9 per litre and 25,000 litres of car polish at ₹7 per litres. Materials are expected to cost ₹1 a litre for Delta and ₹8 a kg. for Gamma.

Manufacturing wages in the industry look like being stable at ₹6 per hour and packing wages at ₹4 per hour throughout the period.

Flexible overhead expense budgets are operated for manufacturing and packing departments based on the number of man-hours worked. These budgets for six months to end of September are:

Manufacturing Dept.			Primary Packing Dept.		
5,000	man-hour	₹40,000	1,700	man-hour	₹26,000
6,000	man-hour	₹50,000	1,900	man-hour	₹28,000
7,000	man-hour	₹60,000	2,100	man-hour	₹30,000
8,000	man hour	₹80,000	2,300	man hour	₹32,000

General administration overhead are budgeted at ₹37,000. At the beginning of the period 1st April, paced stocks will be:

Floor Polish	**2,000 liters**
Car Polish	**3,000 liters**

By end of the period 30th September, it is desired to maintain the pecked stocks of the two products at 3000 liters are 4000 litres respectively. The following are required:

1. **A statement of the standard prime cost per 100 litres of each product.**
2. **A sales and production budget (in quantities) for the six months to 30th September.**
3. **A profit forecast for the period. Show separate gross profits for the two products but do not attempt to allocate overheads between them. No overheads are included in stock valuations. [3+3+6=12]**

Section B

Answer any two questions from this section.

3. (a)

(i) A company is engaged in construction of residential housing, offices, industrial units, Roads, Bridges, Marine facilities etc. having sites in India and abroad. The company also has Joint venture projects in India and abroad. Whether Companies (Cost Records and Audit) Rules 2014 would be applicable to the company? [5]

(ii) Who can be appointed as a cost auditor? [3]

3. (b)

(i) A company has units in SEZ and in non-SEZ areas. The Companies (Cost Records and Audit) Rules 2014 has exempted companies operating in special economic zones from cost audit. What would be applicability of the Companies (Cost Records and Audit) Rules 2014 on such a company in respect of maintenance of cost accounting records and cost audit? [5]

(ii) State the meaning of "Turnover" in relation to the Companies (Cost Records and Audit) Rules, 2014. [3]

3. (c)

(i) Explain the coverage of Aeronautical Services. [6]

(ii) Whether figures are to be provided for Rupees per Unit or Amount in Rupees in the Product and Service Profitability Statement [CRA-3, Part D, Para 1]? [2]

Section C

Answer any three questions from this section.

4. (a)

(i) Explain the term Arc Elasticity of demand. [3]

(ii) Fit straight line by the least square method to the following figures of production of Sugar Factory. Estimate the production for the year 2015.

Year	2008	2009	2010	2011	2012	2013	2014
Production(in Lakh tons)	76	87	95	81	91	96	90

[5]

4. (b)

(i) List the Elements of Market. [4]

(ii) The demand function for a particular brand of Pocket Calculators is $P = 75 - 0.3Q - 0.05 Q^2$.
Find the consumers' surplus at the quantity (Q) of 15 calculators. [4]

4. (c)

(i) Explain the Criticism of Cobb-Douglas Production Function. [4]

(ii) If 'n' be the no. of workers employed the average cost of production is given by

$C = 24n + \left[\frac{3}{2(n-4)}\right]$ Show that $n = 4\frac{1}{4}$ will make C minimum. **[4]**

4. (d)

(i) Assume that for a closed economy E = C + I + G; Where E= total expenditure on consumption goods, I = Exp. on Investment goods and G = Govt. Spending. For equilibrium, we must have E = Y, Y being total income received.

For a certain Economy, it is given that C = 15 + 0.9Y, where I = 20 + 0.05Y and G = 25. Find the equilibrium values of Y, C and I. How will these change, if there is no Government spending ? **[4]**

(ii) The total revenue from sale of 'x' units is given by the equation $R = 100x - 2x^2$, calculate the point of price elasticity of demand, when marginal revenue is 20. **[4]**