Paper – 10: Cost & Management Accountancy

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

This paper contains 4 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.

(a) ABC Ltd. Company has Fixed cost of ₹ 90,000, Sales ₹ 3,00,000 and Profit of ₹60,000. Calculate the Sales Volume if in the next period, the ABC Ltd. Company suffered a loss of ₹20,000. [2]

(b) Distinguish between Absolute ton-kms and Commercial ton-kms. [2]

(c) A television Company manufactures several components in batches.
The following data relate to one component:

Annual demand	32,000 units
Set up cost/batch	₹120
Annual rate of interest	12%
Cost of production per unit	₹16

Calculate the Economic Batch Quantity (EBQ). [2]

(d) The cost per unit of a product manufactured in a factory of ZENION LTD. amounts to ₹160 (75% variable) when production is 10,000 units. If the production increases by 25% what would be the cost of production per unit? [2]

(e) Write down the two features of Non-Integrated Accounting System. [2]

(f) ABC LTD. is a 100% EOU as per the policy announced under the Foreign Trade Policy but is not registered under the provisions of Foreign Trade Policy. Will this company be exempted from mandatory Cost Audit? [2]

(g) A Company is covered under the Companies (Cost Accounting Records) Rules, 2011. But some of its products are not covered under Cost Audit. Does such Company need to file Compliance Report? [2]

(h) What are the conditions for price discrimination? [2]

(i) Given $C = x^3 - 10x^2 + 5x$; $R = 8x^2 + 11x - 4$. Find the total profit and hence marginal profit. [2]

(j) Show that elasticity of demand = $\frac{AR}{AR - MR}$, where AR and MR are average and marginal revenue respectively at any output. [2]

2. Answer any two questions

(a) (i) Sintex Ltd. has prepared its expense budget for 20,000 units in its factory for the year 2014 as detailed below:

	₹ per unit
Direct Materials	45
Direct Labour	20
Variable overhead	15
Direct Expenses	6
Selling Expenses (20% fixed)	15
Factory Expenses (100% fixed)	7
Administration Expenses (100% fixed)	4
Distribution Expenses (85% variable)	12
Total	₹124

Prepare Flexible budget for the production of 14,000 units and 18,000 units. [8]

(ii) Difference between Job Costing and Process Costing. [4]

(iii) An amount of ₹19,80,000 was incurred on a contract work upto 31.03.2013. Certificates have been received to date to the value of ₹24,00,000 against which ₹21,60,000 has been received in cash. The cost of work done but not certified amounted to ₹45,000. It is estimated that by spending an additional amount of ₹1,20,000 (including provision for contingencies) the work can be completed in all respects in another two months. The agreed contract price of the work is ₹25 lakhs. Compute a conservative estimate of the profit to be taken to the profit & Loss Account. Illustrate four method of computing the profit. [8]

(b) (i) The following are the figures relating to a factory for two successive years:

	Year I (₹)	Year II (₹)
Sales	10,00,000	16,80,000
Marginal Cost of Sales	6,00,000	8,00,000
Contribution	4,00,000	8,80,000

During Year II, the selling price increased by 20% and the company implemented a cost reduction programme very aggressively. You are required to analyse the increase in contribution due to:

(i) Increase in selling price
(ii) Increase in sales volume
(iii) Reduction in cost [3+3+3]

(ii) A factory has a key resource (bottleneck) of Facility X which is available for 31,300 minutes per week. Budgeted factory costs and data on two products, A and B, are shown below:

Product	Selling price/Units	Material cost/Unit	Time in Facility X
A	₹40	₹20.00	5 minutes
B	₹40	₹17.50	10 minutes

Budgeted factory cost per week:

	₹
Direct labour	25,000
Indirect labour	12,500
Power	1,750
Depreciation	22,500
Space Costs	8,000
Engineering	3,500
Administration	5,000

Actual production during the last week is 4,750 units of product A and 650 units of product B. Actual factory cost was ₹78,250.
Calculate:
(i) Total factory costs (TFC)
(ii) Cost per factory minute
(iii) Return per factory minute for both products
(iv) TA ratios for both product
(v) Throughput cost per the week
(vi) Efficiency ratio [$1^1/_2+1^1/_2+3+2+1^1/_2+1^1/_2$ = 11]

(c) (i) A company manufactures one main product (A) and two by-products X and Y. For the month of April 2014, following details are available:
Total Cost up to Separation point ₹2,20,000.

	A	X	Y
Cost after separation	-	₹35,000	₹24,000
No. of units produced	4,000	1,800	3,000
Selling price per unit	₹100	₹40	₹30
Estimated net profit as percentage to sales value	-	20%	30%
Estimated selling expenses as percentage to sales value	20%	15%	15%

There is no beginning or closing inventories.
Prepare statement showing:
(i) Allocation of joint cost; and
(ii) Product wise and overall profitability of the company for April 2014. [5+5]

(ii) ESKAY LTD. operates a system of standard costing throughout its division. The company Produces an alloy by mixing and processing three materials P, Q and R as per standard data given below:

Materials	Ratio of Input	Cost per kg (₹)
P	2	40
Q	2	60
R	1	85

Note: Loss during processing is 5% of input and this has no realizable value. During the month of June, 2014, 5,80,000 kg of finished alloy was obtained from inputs as per details given below:

Materials	Quantity Consumed (kg)	Cost per kg (₹)
P	2,40,000	38
Q	2,50,000	59
R	1,10,000	88

You are required to calculate the following variances:
I. Material Cost Variance;
II. Material Price Variance;
III. Material Mix Variance;
IV. Material Yield Variance;
V. Material Usage Variance. [2x5=10]

3. Answer any two questions.

(a) (i) Write a note on flow chart. [4]

(ii) Sufficient details should be available in Cost Records, on Packing Materials. Explain. [4]

(b)(i) As a Cost Auditor, describe different measures to rectify imbalance in production facilities. [5]

(ii) A company is exporting 80% of its sales and 20% is domestic sale. Can this company be exempted from the mandatory cost audit? [3]

(c) "It is not possible to merge Cost Audit with Financial Audit to have a Composite Audit." Discuss. [8]

4. Answer any three questions.

(a) Why does demand curve slopes downward? How many methods can be used to measure the Elasticity of Demand? [7+1]

(b) (i) Explain going rate pricing. [5]

(ii) The demand function is $x = 80 + 2P + 5P^2$ where 'x' is the demand for the commodity at Price 'P'. Find the elasticity of demand at P = 5 [3]

(c) What are the pricing policies for introduction stage of a new product? [8]

(d) (i) The cost function 'c' of a firm = $\frac{1}{3}x^3 - x^2 + 5x + 3$, find the level at which the marginal cost and the average variable cost attain their respective minimum. [4]

(ii) Calculate the trend values by the method of least squares from the data given below and estimate the sales for the year 2014.

Year	**2010**	**2011**	**2012**	**2013**	**2014**
Sales	70	74	80	86	90

[4]