Paper 10 - Cost & Management Accountancy

QUESTION 1, which is compulsory. Attempt all of them.
Section-A has three questions. Attempt any two of them.
Section-B has two questions. Attempt any one of them.
Section-C has three questions. Attempt any two of them.

Question.1

a) Enumerate the features of Integrated Accounting System. [2]

b) Product 'A' required 12 kg of material @ ₹5.00 per kg. The actual consumption of material for the manufacturing product A comes to 15 kg of material @ ₹6.00 per kg. Calculate:
   i) Material Cost Variance
   ii) Material Usage Variance [2+2]

c) The output of three different products A, B, and C in a factory are 20,000 kg, 15,000 kg and 15,000 kg respectively. If the costs which totals to ₹13,75,000 are in proportion of 4:6:7, then find out the cost per equivalent unit. [2]

d) The opening and closing balances of Plant and Machinery of Gupta & Co, are ₹2,00,000 and ₹2,80,000 respectively. Depreciation charged during the year is ₹20,000 (under Straight Line Method) and ₹35,000 (under Diminishing Balance Method). Calculate the additions made during the year, in the above two situations. [2]

e) Define 'Turnover', as per Cost Accounting Record Rules. [2]

f) Can a company be exempted from maintenance of Cost Accounting Records. If so, how? [2]

g) State Giffen Paradox. [2]

h) What is Arc Elasticity? [2]

i) What is Delphi Method of demand forecasting and how it is undertaken? [2]

Question.2

a) ABC Ltd., a manufacturer of a specialised product, is having a process costing system. The stock of work-in-progress at the end of each month is valued on FIFO basis. At the beginning of a month, the stock of work-in-progress was 400 units (40 per cent complete) which was valued as follows:

Materials	₹3,600
Labour	₹3,400
Overheads	₹1,000
	₹8,000

During the month, actual issue of materials for production purpose was ₹ 68,500. Wages and overheads in the month amounted to ₹ 79,800 and ₹ 21,280 respectively. Finished production taken into the stock in the month was 2,500 units. There was no loss in the process. At the end of the month, the stock of work-in-progress was 500 units (60 per cent complete as to labour and overheads and 80 per cent complete as to materials).
Prepare a process Cost Sheet showing total and unit costs. [10]

b) Arun Ltd. follows standard costing system and the following information is available for the month of April, 2014.

i) Actual Production – 1,500 kg.

Materials Consumed			Labour deployed		
Type	Quantity (kgs.)	Rate (₹ per kg.)	Worker	Time worked (hours)	Rate (₹ per hour)
A	550	5.00	P	32	11.00

B	200	6.00	Q	14	9.00
C	350	2.00	R	20	11.00
D	400	5.00	S	10	18.00

ii) Details of standard materials and labour cost based on production of 1,000 kgs. are as under:

Consumption of Materials			Deployment of labour		
Type	Quantity (kgs.)	Rate (₹ per kg.)	Worker	Time (hours)	Rate (₹ per hour)
A	400	4.00	P	20	10.00
B	100	5.00	Q	10	8.00
C	200	2.50	R	15	12.00
D	300	6.00	S	7	20.00

From the above information you are required to compute

(i) Labour rate variances

(ii) Labour efficiency variances

Also prepare a reconciliation statement between actual cost and standard cost for labour.
[3+3+2]

c) State the general principles of Standard Costing. [2]

Question.3

a) Anand Co. Ltd., having an adequate supply of labour presents the following data. Kindly analyse and state the area to be allotted for cultivation of various types of vegetables which would result in the maximization of profits. The company contemplates growing Mushrooms, Onion, Carrots and Corns.

	Mushrooms	Onions	Carrots	Corns
Selling Price per box (₹)	30	30	60	90
Seasons yield per acre (No of Boxes)	500	150	100	200
	Cost (₹)			
Material per acre	270	105	90	150
Labour for growing per acre	300	225	150	195
Picking & Packing per box	1.50	1.50	3.00	4.50
Transport per Box	3.00	3.00	1.50	4.50

The fixed cost in each season would be:

i) Cultivation & growing - ₹ 56,000
ii) Picking - ₹ 42,000
iii) Transport - ₹ 10,000
iv) Administration - ₹ 84,000
v) Land Revenue - ₹ 18,000

The company also faces the following limitations:

i) The area available is 450 acres, but out of it 300 acres are suitable for growing only carrots and onions. The balance 150 acres is suitable for growing all four vegetables.
ii) As the products may be hypothecated to banks, hence the area allotted to any vegetable should be demarcated clearly in complete acres and not in fractions of an acre.
iii) The marketing strategy of the company requires compulsory production of all four types of vegetables in a season and the minimum quantity of any type should be 18,000 boxes.

Also calculate the profits that would arise in case the firm follows your advice. [4+4]

b) For a particular stationary item, the sales price per unit is ₹ 25. The variable cost per unit for Material & Labour is ₹15. The variable selling cost per unit is ₹4. Factory overheads amounts to ₹5,40,000 and Fixed Administration Cost ₹ 2,70,000. Based on the given data calculate:

i. BEP expressed in amount of sales in rupees.
ii. Number of units that must be sold to earn a profit of ₹ 90,000 per year
iii. How many units must be sold to earn a net income of 15% of sales.

[2+2+2]

c) The following figures have been extracted from the books of accounts of "Anu Ltd' for the year 2013.

Particulars	₹
Direct Material consumption	45.00,000
Direct Wages	36,00,000
Factory Overheads	16,00,000
Administration Overhead	7,00,000
Selling & Distribution Overhead	9,60,000
Bad Debts	80,000
Preliminary expenses written off	40,000
Legal Charges	10,000
Dividend received	1,00,000
Interest on deposit received	20,000
Sales (1,20,000 units)	1,20,00,000
Closing Stock	
Finished goods (4,000 units)	3,20,000
Work-in-progress	2,40,000

Cost accounts for the same period reveal that the direct material consumption was ₹ 50, 00,000. Factory overhead recovered was 20% on prime cost; Administration overhead recovered was @ ₹ 6.00 per unit of production and selling and distribution overhead recovered were @ ₹ 8.00 per unit sold.

You are required to prepare the Costing profit & loss account and reconcile the same with the Financial profit and loss account provided that the net profit as per financial books is ₹ 11,90,000 for that year. [3+3]

Question.4

a) "India Transport Ltd" operates a fleet of trucks. The records for the truck, 'Special' reveals the following information for April, 2014:

1. Days maintained	30
2. Days operated	25
3. Days idle	5
4. Total hours operated	300
5. Total kilometers covered	2,500
6. Total Tonnage carried (4 tonne – load per trip, return journey empty)	200

The following further information is made available:

i) Operating Cost for the month:

1. Petrol	₹ 400
2. Oil	₹ 170
3. Grease	₹ 90
4. Wages to driver	₹ 550

5. Wages to helpers	₹ 350

ii) Maintenance Costs for the month:

1. Repairs	₹ 170
2. Overhaul	₹ 60
3. Tyres	₹ 150
4. Garage charges	₹ 100

iii) Fixed costs for the month based on the estimates for the year:

1. Insurance	₹ 50
2. License & Tax	₹ 80
3. Interest	₹ 40
4. Other Overheads	₹ 190

iv) Capital Costs:

1. Cost of acquisition	₹ 54,000
2. Residual Value at the end of 5 years	₹ 36,000

Prepare cost sheet and calculate the following:

i) Cost per day operated

ii) Cost per kilometer [4+1+1]

b) Ashim Ltd. produces four joint products, A, B, C and D, all of which emerge from the processing of one raw material. The following are the relevant data:

Production for the period:

Joint Products	Number of units	Selling price per unit (₹)
A	500	18.00
B	900	8.00
C	400	4.00
D	200	11.00

The company budgets for a profit of 10% of sales value. The other estimated costs are:

Particulars	Amount (₹)
Carriage Inwards	1,000
Direct Wages	3,000
Manufacturing Overhead	2,000
Administration Overhead	10% of sales value

You are required to:

i) Calculate the maximum price that may be paid for the raw material

ii) Prepare a comprehensive cost statement for each of the products allocating the materials and other costs based upon

a. Number of units b. Sales Value [4+3+3]

c) Analyse B.E.P with the help of a graph. Also state what is Angle of Incidence and Margin of Safety. [2+1+1]

Section-B

Answer any one question from this section.

Question.5

a) What are the objectives of Cost Audit? [6]

b) State the provisions under Companies Act relating to Cost Audit, mentioning relevant sections. [10]

Question.6

As per Cost Audit Record Rules, state the functions of the following industries.

a) Telecommunication Industry
b) Pharmaceuticals Industry
c) Petroleum Industry
d) Electricity Industry
e) Sugar Industry [5+5+2+2+2]

SECTION C

Answer any two questions from this section.

Question.7

a) The total cost function of a manufacturing firm is given by $C = 2x^3 - x^2 + 3x + 5$ and the Marginal Revenue $= 8 - 3x$, X = output, determine the most profitable output of the firm. [4]

b) What are the factors influencing the pricing of a product? [3]

c) Explain the different kinds of demand oriented pricing. [5]

Question.8

a) What are the features of monopoly market? [4]

b) Formulate Linear programming model for the following problem and solve the problem using simplex method.

A company sells two types of products, one is Liquid and the other is Solid. The Liquid contains 2 units of chemical A and 4 units of chemical B per jar and the Solid contains 3 units of each of the chemicals A and B per carton. The Liquid is sold for ₹3 per jar and the Solid is sold for ₹4 per carton. A customer requires at least 90 units of chemical A and at least 120 units of the chemical B for his business. How many of each type of Liquid should the customer purchase to minimize the cost while meeting his requirements? [2+6]

Question.9

a) Define market and what are its elements? [2+3]

b) How is price and output determination done under monopoly market? [5]

c) How is monopoly price related to elasticity of demand? [2]