Paper 10 – Cost & Management Accountancy

1. Answer all questions :

(i) The cost-volume-profit relationship of a company is described by the equation y = ₹ 8,00,000 + 0.60x, in which x represents sales revenue and y is the total cost at the sales volume represented by x. If the company desires to earn a profit of 20% on sales, what is the required sales level ? **[2]**

(ii) Akash Ltd. is preparing its cash budget for the period. Sales are expected to be ₹1,00,000 in April 2012, ₹2,00,000 in May 2012, ₹3,00,000 in June 2012 and ₹ 1,00,000 in July 2012. Half of all sales are cash sales, and the other half are on credit. Experience indicates that 70% of the credit sales will be collected in the month following the sale, 20% the month after that, and, 10% in the third month after the sale. What is the budgeted collection for the month of July 2012 ? **[2]**

(iii) A lorry starts with a load of 25 tonnes of goods from station A. It unloads 5 tonnes at station B and rest of goods at station C. It reaches back directly to station A after getting reloaded with 18 tonnes of goods at station C. The distance between A to B, B to C and then from C to A are 60 kms. 100kms, and 150 kms respectively. Compute 'Absolute tones – kms' and 'Commercial tones – kms'. **[3]**

(iv) What do you understand by Batch Costing? In which industries it is applied? **[3]**

(v) How is "Manufacturing Activity" defined under the Companies (Cost Accounting Record Rules), 2011? **[4]**

(vi) What are the managerial use of production function? **[4]**

(vii) The cost function is C = 100 + q where the product is sold at ₹ 5 per unit. Determine breakeven sales and profit when 125 units are sold. **[2]**

Section A – Answer any two questions from this section

2. (a) Alpha Limited has decided to analyse the profitability of its five new customers. It buys bottled water at ₹ 90 per case and sells to retail customers at a list price of ₹ 108 per case. The data pertaining to five customers are:

	Customers				
	A	B	C	D	E
Cases sold	4,680	19,688	1,36,800	71,550	8,775
List Selling Price	₹ 108	₹ 108	₹ 108	₹ 108	₹ 108
Actual Selling Price	₹ 108	₹ 106.20	₹ 99	₹ 104.40	₹ 97.20
Number of Purchase orders	15	25	30	25	30
Number of Customer visits	2	3	6	2	3
Number of deliveries	10	30	60	40	20
Kilometers travelled per	20	6	5	10	30

delivery					
Number of expedited deliveries	0	0	0	0	1

Its five activities and their cost drivers are:

Activity	Cost Driver Rate
Order taking	₹ 750 per purchase order
Customer visits	₹ 600 per customer visit
Deliveries	₹ 5.75 per delivery Km traveled
Product handling	₹ 3.75 per case sold
Expedited deliveries	₹ 2,250 per expedited delivery

Required:

(i) Compute the customer-level operating income of each of five retail customers now being examined (A, B, C, D and E). Comment on the results.

(ii) What insights are gained by reporting both the list selling price and the actual selling price for each customer?

(iii) What factors Alpha Limited should consider in deciding whether to drop one or more of five customers? **[10+2+2+2=16]**

(b) What is Equivalent Unit ? **[4]**

3. (a) The following figures are extracted from the Financial Accounts of Sellwel Ltd. For the year ended 31-3-2012:

	₹	₹
Sales (20,000 units)		50,00,000
Materials		20,00,000
Wages		10,00,000
Factory Overheads		9,00,000
Administrative Overheads		5,20,000
Selling and Distribution Overheads		3,60,000
Finished Goods (1,230 units)		3,00,000
Work-in-progress:		
Materials	60,000	
Labour	40,000	
Factory Overheads	40,000	
		1,40,000
Goodwill Written off		4,00,000
Interest paid on capital		40,000

In the costing records, Factory Overhead is charged at 100% of Wages, Administration Overhead 10% factory cost and Selling and Distribution Overhead at the rate of ₹ 20 per unit sold.

Prepare a statement reconciling the profit as per Cost Records with the profit as per Financial Records. [8]

(b) Rex Limited commenced a contract on 01.07.2012. The total contract price was ₹ 5,00,000 but Rex Limited accepted the same for ₹ 4,50,000. It was decided to estimate the total profit and to take to the credit of profit and loss account that proportion of estimated profit on cash basis which the work completed bore to the total contract. Actual Expenditure till 31.12.2012 and estimated expenditure in 2013 are given below:–

Expenses	Actuals Till 31.12.12 ₹	Estimate For 2013 ₹
Materials	75,000	1,30,000
Labour	55,000	60,000
Plant Purchased (original cost)	40,000	—
Misc. Expenses	20,000	35,500
Plant Returned to Stores on 31.12.09 at original cost	10,000	35,500
		As on 30.09.10
Materials at Site	5,000	Nil
Work Certified	2,00,000	Full
Work Uncertified	7,500	Nil
Cash Received	1,80,000	Full

The Plant is subject to annual depreciation @ 20% of original cost. The contract is likely to be completed on 30.09.2013.
You are required to prepare the contract account for the year ended 31.12.12. Workings should be clearly given. It is the policy of the company to charge depreciation on time basis. **[7]**

(c) What do you understand by Operating Costs? Describe its essential features and state where it can be usefully implemented. **[5]**

4. (a) A company has two divisions. Division 'M' and Division 'N'. Division 'M' has a budget of selling 2,00,000 nos. of a particular component 'x' to fetch a return of 20% on the average assets employed. The following particulars of Division 'M" are also known :

Fixed overhead	₹ 5 lakhs
Variable cost	₹ 1 per unit
Average assets	
Sundry debtors	₹ 2 lakhs
Inventories	₹ 5 lakhs
Plant & equipments	₹ 5 lakhs

However, there is constraints in Marketing and only 1,50,000 units of the component 'x' can be directly sold to the Market at the proposed price.

It has been gathered that the balance 50,000 units of component 'x' can be taken up by Division 'N'. Division 'M' wants a price of ₹ 4 per unit of 'x' but Division 'N' is prepared to pay ₹ 2 per unit of 'x'.

Division 'M' has another option in hand, which is to produce only 1,50,000 units of component 'x'. This will reduce the holding of assets by ₹ 2 lakhs and fixed overhead by ₹ 25,000.

You are required to advise the most profitable course of action for Division 'A'. **[5]**

(b) In its budget for the period ahead 'M' Ltd. Is considering two possible sales forecasts for the three products as follows :

	Product		
Forecast	X	Y	Z
I. Sales (Units)	22,000	40,000	6,000
Selling price per unit	₹ 10	₹ 6	₹ 7.50
II. Sales (Units)	30,000	50,000	7,000
Selling price per unit	₹ 9	₹ 5.50	₹ 7.50

Variable costs per unit are expected to be the same at the different levels of possible sales. The variable costs per unit are as follows :

	Product		
Particulars	X	Y	Z
Direct material	3.00	2.00	4.00
Direct labour	2.00	1.50	1.00
Variable overheads	1.00	0.50	1.00

Fixed overheads are expected to total ₹ 1,00,000. These are expected to be unaffected by the possible changes in activity which are being considered. Due to recent high labour turnover problems, direct labour will be restricted to a maximum of ₹ 1,30,000 in the period. It can be assumed that all labour is of the same grade and is freely transferable between products. Other resources are expected to be generally available.

You are required to :

Taking each of the possible sales forecasts in turn

(i) Say what the principal budget factor is for each of the forecasts.

(ii) For each forecast calculate the sales budget that you would recommend to maximize profits.

(iii) What profit would you expected from each sales budget ?

Assume that the products will be sold according to the selling price estimated as per the forecast and no interchange of the forecast is allowed. **[4+4+4=12]**

(c) What is meant by 'Inter-firm comparison'? **[3]**

Section B – Answer any one question from this section

5. (a) The following figures are extracted from Accounts of IREVNA LTD., a single product manufacturing company:

Year ended 31st March	2012	2011	2010
	(Amount in ₹ lakh)		

Gross Sales including Excise duty:	2,856	2,779	2,625
Excise Duty	413	392	371
Raw materials consumed	1,596	1,484	1,365
Direct wages	49	45	38
Power and fuel	42	38	34
Stores and spares	8	7	5
Depreciation charges to production cost centres Factory Overheads:	22	21	18
Salaries and wages	7	6	4
Depreciation	3	3	3
Rates and taxes	1	1	1
Other Overheads	8	7	6
Administrative Overheads:			
Salaries and Wages	14	13	11
Rates and taxes	3	3	3
Other Overheads	231	216	207
Selling and Distribution Overheads:			
Salaries and wages	10	8	7
Packing and forwarding	8	8	7
Depreciation	1	1	1
Other overheads	174	165	151
Interest	119	104	95
Bonus and Gratuity	17	14	13
Current Assets	1,176	1,014	896
Current Liabilities and Provisions	454	427	344

You are required to compute the following ratios as per requirement of PARA-9 to the Annexure of the Companies (Cost Audit Report) Rule, 2011:

(i) Profit Before Tax (PBT) to Value Added
(ii) Value Added to Net Sales;
(iii) Profit Before Tax (PBT) to Net Sales. **[4+4+2=10]**

(b) What are the differences between Accounting Records & Statistical Records? Is it compulsory to maintain statistical records under Cost Accounting Records Rules? If so, why? **[4+2 = 6]**

6. (a) A company with multiple products range is having Cost Audit for some of its products. What would be the applicability of Cost Audit on other products now covered under the Companies (Cost Accounting Records) Rules, 2011? **[2]**

(b) The following details of the process wise, Input Output and Direct Employees Costs are taken from the RUKMARI INDUSTRIES LTD., a manufacturing company, for the year ended March

31,2012:

Process	Input (Tonne)	Output (Tonne)	Direct Employee Costs (₹)
I	48,000	43,200	1,29,600
II	50,000	44,000	1,76,000
III	72,000	66,240	3,31,200
IV	60,000	55,500	4,44,000
V	80,000	73,400	6,60,600

Required :

Calculate " the Direct Employees Cost per Tonne of the product under reference" as required in PARA-5 of the Annexure to the Cost Audit report Rules, 2011. **[8]**

(c) Answer the following questions with respect to the Companies (Cost Accounting Records) Rules, 2011:

- **(i)** Whether product manufactured for 100% captive/ self –consumption shall be covered under these Rules?
- **(ii)** What does turnover mean under these Rules? Is gross turnover inclusive of excise duty?
- **(iii)** Whether film industry like film producing companies/ studios registered under Indian Companies Act shall be covered under these Rules? **[2x3=6]**

Section C – Answer any two from this section

7. (a) Define Managerial Economics. **[3]**

(b) Distinguish between macro and micro economics. **[6]**

(c) Derive the relationship between AC and MC. **[3]**

8. (a) The demand function is given by $p= (a – bq)^2$, $a,b >0$. Show
(i) the curve is downward slopping.
(ii) it is convex to the origin.
(iii) What is the relation between a & b if ed = 1? **[2+2+2=6]**

(b) What are ISQquants ? What is the difference between ISOquants curve and Indifference curve? **[2+4=6]**

9. (a) What are features of an oligopolistic market ? **[6]**

(b) For the cost function $C = a_0 + b_1x – c_2x^2 + d_3x^3$, find x for which AVC & MC are minimum. **[6]**