PAPER 10- COST & MANAGEMENT ACCOUNTANCY

Paper 10 - Cost & Management Accountancy

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

Section - A

1. Answer Question No.1 which is compulsory carrying 25 Marks

(a) Answer the following [5 x 2 = 10]

(i) The standard wage rate is ₹40 per hour; Actual wage rate is ₹45 per hour, standard time is 500 hours and actual hours worked is 480 hours. If wages paid for 505 hours then what will be the labour idle time variance?

(ii) Sales during the following months
2015-Oct ₹ 12,00,000
2015-Nov ₹ 14,00,000
2015-Dec ₹ 16,00,000
60% of sales are collected in the month after sales, 30% in the second month and 10% in the third month. What is the Budgeted collection from Debtors for the month of Jan' 2016?

(iii) The profit volume ratio of X Ltd. is 50% and the margin of safety is 40%. You are required to calculate the net profit if the sales volume is ₹ 1,00,000.

(iv) Cash Received from Contracted is ₹ 12,80,000 which is 80% of work certification, So What is the amount of work Certified?

(v) Company has invested ₹ 5,00,000 in machinery for manufacturing a Product in Division X. Cost of Capital is 20%. The Profit from division X is ₹ 1,20,000 for the year, Compute the Residual Income from Division X?

(b) Match the following [5 x 1 = 5]

	Column 'A'		Column 'B'
1	Uniform Costing	A	Measures divisional performance
2	Escalation Clause	B	Contract Costing
3	Residual Income	C	Technique to assist inter-firm comparison.
4	Form – CRA – 2	D	Form for filing Cost Audit Report with the Central Government
5	Form – CRA – 4	E	Form of intimation of appointment of cost auditor by the company to Central Government

(c) List out the any five objectives of Cost Audit. [5]

(d) The total cost function of a firm C = (x3/ 3) – 5x² + 28x + 10, where C is total cost and 'x' is the output. A tax @ Rs. 2/- per unit of output is imposed and the producer adds it to his cost. If the demand function is given by P = 2530 - 5x, where ₹ 'P' is the price per unit of output, Find the profit maximising output and the price at the level. [5]

Section - B

(Cost & Management Accounting – Methods & Techniques and Cost Records and Cost Audit)

Answer any three questions from the following
Each question carries 17 marks

2. (a) From the following particulars furnished by M/s. Starlight Co. Ltd. Find out (i) Material cost variance; (ii) Material usage variance and (iii) Material price variance.

Value of Material purchased	₹ 9,000
Quality of Material purchased	units
Standard quantity of materials required per tonne of Finished product	3000 units
Standard rate of material	25 units
Opening Stock	₹2 per units
Closing Stock of material	Nil
Finished production during the period	500 units
	80 tonnes

[14]

(b) Write any three reasons for disagreement of Financial Profits with Cost Profits ? [3]

3. (a) A manufacturer with overall (interchangeable among the products) capacity of 1,00,000 machine hours has been so far producing a standard mix of 15,000 units of product A, 10,000 units of product B and C each. On experience, the total expenditure exclusive of his fixed charges is found to be ₹ 2.09 lakhs and the cost ratio among the product approximately 1, 1.5, 1.75 respectively per unit.

The fixed charges comes to ₹ 2 per unit. When the unit selling prices are ₹ 6.25 for A, ₹ 7.5 for B and ₹ 10.5 for C. He incurs a loss.

	Mix-I	Mix-II	Mix-III
A	18,000	15,000	22,000
B	12,000	6,000	8,000
C	7,000	13,000	8,000

As a management accountant what mix will you recommend? [12]

(b) Vishnu Ltd. manufactures and sells product "PT". The company estimates the following demand for product "PT" for the year 2014-2015:

Quarter	Units
I	20,000
II	22,000
III	25,000
IV	33,000

The production department will manufacture 80% of the current quarter's sales and 20% of the following quarter's sales. The anticipated and desired stock position for the year 2014- 2015 is as follows:

Anticipated stock as on April 1, 2014	4,000 units
Desired stock as on March 31, 2015	5,000 units

The standard cost per unit of the product based on a budgeted production volume of 3,00,000 hrs is as follows:

Direct materials	2 kgs @ ₹20	₹40
Direct labour	3 hrs @ ₹20	₹60
Variable overhead	3 hrs @ ₹10	₹30
Fixed overhead	3 hrs @ ₹12	₹36

Expected selling price of the product is ₹210. You are required to:
Prepare a quarter-wise production budget for 2014-2015, showing the number of units to be produced and total cost of direct materials, direct labour, variable overheads and fixed overheads. [5]

4. (a) M/s Mysore Petro Ltd. showed a net loss of ₹ 2,08,000 as per their financial accounts for the year ended 31st March, 2012. The Cost accounts, however, disclosed a net loss of ₹ 1,64,000 for the same period. The following information was revealed as a result of the scrutiny of the figures of both the sets of books.

1) Factory overhead under recovered	3,000
2) Administration overhead over recovered	2,000
3) Depreciation charged in financial books	60,000
4) Depreciation recovered in costs	65,000
5) Interest on investment not included in costs	10,000
6) Income-tax provided	60,000
7)Transfer fee(in financial Books)	1,000
8) Stores adjustment(credit in financial books)	1,000

Prepare Reconciliation Statement. [7]

(b) A product goes through three processes from a single input material. At the end of the process I, an intermediate A, which cannot be further processed, also emerges. At the end of process II, another intermediate product, B, also emerges, which cannot be processed further. The main product results at the end of process III. The prices of these products have been frozen by the Government, subject to escalation only for raw material price and labour rate variations. During a period, while the price control was in force, the material cost had gone up by ₹ 15 per kg. and the labour rates increased by Re. 0.80 per labour hour. Given the following information, on inputs and related outputs, you are required to determine the amount of claim for price escalation, for each of the intermediary products A and B and the product and the total claim-

Process	Input (kg.)	Output (kg.)	Labour hours
Process I	2,000	1,600	16,000
Process II	1,440	1,200	18,000
Process III	880	800	16,000

[10]

5. (a) Trimake Limited makes three main products, using broadly the same production methods and equipment for each. A conventional product costing system is used at present, although an Activity Based Costing (ABC) system is being considered. Details of the three products, for typical period are:

	Labour Hours Per unit	Machine Hours per unit	Material Per unit	Volumes Units
Product X	½	1 ½	₹ 20	750
Product Y	1 ½	1	₹ 12	1,250
Product Z	1	3	₹ 25	7,000

Direct labour costs ₹6 per hour and production overheads are absorbed on a machine hour basis. The rate for the period is ₹ 28 per machine hour.

You are required:
(i) to calculate the cost per unit for each product using conventional methods.

Further analysis shows that the total of production overheads can be divided as follows:

	%
Costs relating to set-ups	35
Costs relating to machinery	20
Costs relating to materials handling	15
Costs relating to inspection	30
Total production overhead	100%

The following activity volumes are associated with the product line for the period as a whole.

Total activities for the period

	Number of Set-ups	Number of movements of materials	Number of Inspections
Product X	75	12	150
Product Y	115	21	180
Product Z	480	87	670
	670	120	1,000

You are required:

ii) To calculate the cost per unit for each product using ABC principles [12]

(b) XYZ Ltd which has a system of assessment of Divisional Performance on the basis of residual income has two Divisions, Alfa and Beta. Alfa has annual capacity to manufacture 15,00,000 numbers of a special component that it sells to outside customers, but has idle capacity. The budgeted residual income of Beta is ₹ 1,20,00,000 while that of Alfa is ₹ 1,00,00,000. Other relevant details extracted from the budget of Alfa for the current years were as follows.

Particulars	
Sale (outside customers)	12,00,000 units @ ₹ 180 per unit
Variable cost per unit	₹ 160
Divisional fixed cost	₹ 80,00,000
Capital employed	₹7,50,00,000
Cost of Capital	12%

Beta has just received a special order for which it requires components similar to the ones made by Alfa. Fully aware of the idle capacity of Alfa, beta has asked Alfa to quote for manufacture and supply of 3,00,000 numbers of the components with a slight modification during final processing. Alfa and Beta agree that this will involve an extra variable cost of ₹ 5 per unit.

You are required to calculate,

I. Calculate the transfer price which Alfa should quote to Beta to achieve its budgeted residual income.

II. Also indicate the circumstances in which the proposed transfer price may result in a sub optimal decision for the Company as a whole. [5]

6. (a) As per Cost Audit Record Rules, state the functions of the following industries.

i) Telecommunication Industry

ii) Pharmaceuticals Industry

iii) Petroleum Industry

iv) Electricity Industry [8]

(b) List out Annexure required to be attached along with Form CRA-3 by the Cost Auditors? [9]

Section - C

(Economics for managerial decision making)
Answer any two from the following. Each question carries 12 marks

7. (a) What are factors influencing price of a product? [6]

(b) Cost = $400x - 10x^2 + (1/3)x^3$, Calculate
(i) Output at which Marginal Cost is minimum
(ii) Output at which Average Cost is minimum
(iii) Output at which Marginal Cost = Average Cost. [6]

8. (a) 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(₹ Lakhs)	70	74	80	86	90

[8]

(b) The Average Cost function (AC) for a certain commodity is given by AC = 2x – 1 + 50/x in terms of output x, find the output for which (i) Average cost is increasing (ii) Average cost is decreasing (iii) Find the total cost (iv) Marginal Cost. [4]

9. (a) A manufacturer can sell "x" items per month, at price P = 200 – 2x. Manufacturer's cost of production ₹ Y of 'X' items is given by Y= 2x + 2000. Find no. of items to be produced to yield maximum profit p.m. [7]

(b) A manufacturer can sell "x" items (x > 0) at a price of (330 – x) each; the cost of producing 'x' items is ₹ x^2 + 10x + 12. How many items should he sell to make the maximum profit? Also determine the maximum profit. [5]