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**

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 **[2x10=20]**

(a) XYZ Company fixes the inter-divisional transfer prices for its products on the basis of cost plus an estimated return on investment in its divisions. The relevant portion of the budget for the Division A for the year 2013 -14 is given below.

Particulars	Amount in ₹
Fixed Assets	5,00,000
Current Assets (other than debtors)	3,00,000
Debtors	2,00,000
Annual Fixed Cost for the Division	8,00,000
Variable Cost Per unit of product	10
Budgeted Volume of Production per year (units)	4,00,00
Desired Return on Investment	20%

You are required to determine the transfer price for Division A.

(b) Selling price of a product is ₹5 per unit, variable cost is ₹3 per unit and fixed cost is ₹12,000. Calculate the break-even point in unit.

(c) Bharat Ltd. is preparing its cash budget for the period. Sales are expected to be ₹ 1,00,000 in April 2014, ₹2,00,000 in May 2014, ₹ 3,00,000 in June 2014 and ₹ 1,00,000 in July 2014. 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. Calculate the budgeted collection for the month of July 2014.

(d) Budgeted sales for the next year is 5,00,000 units. Desired ending finished goods inventory is 1,50,000 units and equivalent units in ending W-I-P inventory is 60,000 units. The opening finished goods inventory for the next year is 80,000 units, with 50,000 equivalent units in beginning W-I-P inventory How many equivalent units should be produced?

(e) State out-of-pocket cost.

(f) State Cost Audit.

(g) Difference between Cost Accounting policy and Cost Accounting system.

(h) The Cost(C) of a firm is given by the function $C = x^3 + 12x^2 – 10x+5$, find the Average Cost, & Marginal cost and x being the output.

(i) The Demand and Supply function under perfect Competition are $y=16-x^2$ and $y=2x^2+4$ respectively. Find the Market Price.

(j) State the conditions for price discrimination.

2. Answer any two questions from a, b and c. [2x20=40]

(a)

(i) A radio manufacturing company finds that while it costs ₹6.25 each to make componenet X 273 Q, the same is available in the market at ₹5.75 each, with an assurance of continued supply. The breakdown of cost is:

Materials	₹2.75 each
Labour	₹1.75 each
Other Variable Costs	₹0.50 each
Depreciation and other Fixed Cost	₹1.25 each
Total Cost	₹6.25 each

(I) Should you make or buy?

(II) What would be your decision if the supplier offered the component at ₹4.85 each? [3+2]

(ii) Explain about Zero Based Budgeting. [6]

(iii) A manufacturing concern, engaged in mass production produces standardized electric motors in one of its departments. From the following particulars of a job of 50 motors you are required to value the work-in-progress and finished goods. [5+4]

I. Costs incurred as per job card:

Particulars	₹
Direct Material	75,000
Direct Labour	20,000
Overheads	60,000

II. Selling price per motor: ₹4,500

III. Selling and distribution expenses are at 30% of sales value.

IV. 25 Motors are completed and transferred to finished goods.

V. Completion stage of work-in-progress:

Particulars	
Direct Material	100%
Direct Labour & Overheads	60%

(b)

(i) P Ltd. has two divisions; S and T. S transfer all its output to T, which finishes the work. Costs and revenues at various levels of capacity are as follows:

Output	S. cost	T Net revenues (i.e. revenue minus costs incurred in T)	Profit
Units	₹	₹	₹
600	600	2,950	2,350
700	700	3,250	2,550
800	840	3,530	2,690
900	1,000	3,780	2,780
1,000	1,200	4,000	2,800
1,100	1,450	4,200	2,750
1,200	1,800	4,350	2,550

Company profits are maximized at ₹2,800 with output of 1,000 units. If P Ltd. wish to select a transfer price in order to establish S and T as profit centres, what transfer price would motivate the managers of S and T together to produce 1,000 units, no more and no less?

P Ltd. wants that the transfer price should be set at ₹2.10 per unit. Comment on this proposal. [6+(4+1)]

(ii) Relevant data relating to a Company are:

	Products			
	A	B	C	Total
Production and sales (Units)	60,000	40,000	16,000	
Raw material usage in units	10	10	22	
Raw material costs (₹)	45	40	22	24,76,000
Direct labour hours	2.5	4	2	3,42,000
Machine hours	2.5	2	4	2,94,000
Direct Labour Costs (₹)	16	24	12	
No. of production runs	6	14	40	60
No. of deliveries	18	6	40	64
No. of receipts	60	140	880	1,080
No. of production orders	30	20	50	100

Overheads:	₹
Setup	60,000
Machines	15,20,000
Receiving	8,70,000
Packing	5,00,000
Engineering	7,46,000

The Company operates a JIT inventory policy and receives each component once per production run.

Required:

I. Compute the product cost based on direct labour-hour recovery rate of overheads.
II. Compute the product cost using activity based costing. [2+5]

(iii) List out the two limitation of Inter-firm Comparison. [2]

(c)

(i) A factory has a key resource (bottleneck) of Facility X which is available for 15,650 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	₹30	₹15.00	2.5 minutes
B	₹30	₹13.125	5 minutes

Budgeted factory cost per week:

	₹
Direct labour	18,750
Indirect labour	9,375
Power	1,312.5
Depreciation	16,875
Space Costs	6,000
Engineering	2,625
Administration	3,750

Actual production during the last week is 2,375 units of product A and 325 units of product B. Actual factory cost was ₹58,687.5.

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+3+2+$1^1/_2$+$1^1/_2$]

(ii) The share of production and the cost-based fair price computed separately for a common product for each of the four companies in the same industry are as follows:

	A	B	C	D
Share of Production (%)	40	25	20	15
Costs:				
Direct materials (₹ /Unit)	75	90	85	95
Direct Labour (₹ /Unit)	50	60	70	80
Depreciation (₹ /Unit)	150	100	80	50
Other Overheads(₹ /Unit)	150	150	140	120
Total (₹ / Unit)	425	400	375	345
Fair Price (₹ /Unit)	740	615	550	460
Capital employed per Unit:				
(i) Net Fixed Assets(₹ /Unit)	1,500	1,000	800	500

(ii) Working Capital (₹ /Unit)	70	75	75	75
Total (₹ /Unit)	1,570	1,075	875	575

Required:
What should be the uniform price that should be fixed for the common product? [10]

3. Answer any two questions from a, b and c. [2x8=16]

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

(b)

(i) State the term Telecommunication Services and Write its coverage. [6]

(ii) Variance Accounting is also part of a system of Cost Records. Explain [2]

(c) List out the objectives of Cost Audit. [8]

4. Answer any three questions from a, b, c and d. [3x8=24]

(a)

(i) Explain going rate pricing. [5]

(ii) The price of desktop computers was slashed from ₹50,000 to ₹25,000, and it was observed that the sale of printers went up from 50 printers per month to 150 printers per month. Determine the cross price elasticity between desktop and printers. [3]

(b)

(i) NANDINI ELECTRICALS an electronics firm assumes a cost function $C(x)= x\left(\frac{x^2}{10}+200\right)$, where 'x' is a monthly output in thousands of units. Its revenue function is given by R(x) = x(1100-1.5x).
Find:
(I) the output required per month to make the Marginal Profit = 0; and
(II) the Profit of this level of output. [3+1]

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

(c)

(i) 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	105	111	120	129	135

[4]

(ii) The efficiency (E) of a small manufacturing concern depends on the number of workers (W) and is given by: $10E = \frac{-W^3}{40} + 30W - 392$. Find the strength of the workers, which give maximum efficiency. [4]

(d) Describe the pricing policies for introduction stage of a new product. [8]