

PAPER – 10: COST & MANAGEMENT ACCOUNTANCY

MTP_Intermediate_Syllabus 2012_Jun2016_Set 2

Paper – 10: Cost & Management Accountancy

Time Allowed: 3 Hours

Full Marks: 100

Section A

1. Answer the following question which is compulsory

(a) Answer the following

[5x2 =10]

- (i) A company with a contribution/sales ratio of $33\frac{1}{3}\%$ and fixed cost of ₹ 3 lakhs per month. What is the monthly sales to maintain a margin of safety of 10%?
- (ii) The budgeted fixed overheads for a budgeted production of 10,000 units is ₹ 20,000. For a certain period the actual production was 11,000 units and actual expenditure came to ₹ 24,000. What is the volume variance?
- (iii) The repairs and maintenance of machinery in a factory is found to be a semi variable cost having some relationship with the no. of machine hours run. It was ₹ 17,500 during October 2015 for 7500 machine hours worked and ₹ 15,400 for November 2015 when only 5,400 machine hours were worked. What is the budgeted cost of repairs and maintenance for December 2015 when 6,200 machine hours are expected to be worked?
- (iv) 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%, estimate the cost of production per unit.
- (v) A certain chemical process yields 75% of the material introduced as main product, 20% as a by-product 5% being lost. The percentage of material consumed by-product is 80 : 20.

Time taken to produce one unit of by-product is half the time taken by main product. Overheads have been allocated 200% of wages of each product.

Raw Material ₹ 10,000 Units 2,000
Direct Labour ₹ 8,500 Overheads ₹ 17,000
Apportion the costs to the products.

(b) Match the following

[5×1=5]

	Column 'A'		Column 'B'
1.	Uniform Costing	A	Design of the product
2.	Value engineering	B	Measures divisional performance
3.	Variance analysis	C	Contract Costing
4.	Escalation Clause	D	Management by Exception
5.	Residual Income	E	Technique to assist inter-firm comparison.

- (c) (i) Explain the tenure of a Cost Auditor of the Company? 2
- (ii) A company with multiple product range is having cost audit for some of its products. What would be the applicability of cost audit on other products not covered under Companies (Cost records and Audit) Rules, 2014? 2

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(d) Cost Function $C = \frac{3}{5}x + \frac{15}{4}$, find –

- | | |
|---------------------------------|---|
| (i) Cost when output is 5 units | 2 |
| (ii) Average Cost of 10 units | 2 |
| (iii) Marginal Cost | 2 |

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

1. (a) ABC Ltd. adopts a standard costing system. The standard output for a period is 20,000 units and the standard cost and profit per unit is as under:

Direct Material (3 units @ ` 1.50)	4.50
Direct Labour (3 Hrs. @ ` 1.00)	3.00
Direct Expenses	0.50
Factory Overheads : Variable	0.25
Fixed	0.30
Administration Overheads	0.30
TOTAL COST	8.85
PROFIT	1.15
Selling Price (Fixed by Government)	10.00

The actual production and sales for a period was 14,400 units. There has been no price revision by the government during the period.

The following are the variances worked out at the end of the period.

		Favorable (`)	Adverse (`)
Direct Material			
	Price		4,250
	Usage	1,050	
Direct labour			
	Rate		4,000
	Efficiency	3,200	
Factory Overheads			
	Variable – Expenditure	400	
	Fixed – Expenditure	400	
	Fixed – Volume		1,680
Administration Overheads			
	Expenditure		400
	Volume		1,680

You are required to:

Ascertain the details of actual costs and prepare a profit and Loss statement for the period showing the actual Profit/Loss. Show working clearly. 10

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- (b) Deluxe limited undertook a contract for ₹5,00,000 on 1st July, 2011. On 30th June 2012 when the accounts were closed, the following details about the contract were gathered:

Materials purchased	1,00,000
Wages paid	45,000
General expenses	10,000
Plant Purchased	50,000
Materials on hand 30-6-2012	25,000
Wages accrued 30-6-2012	5,000
Work certified	2,00,000
Cash received	1,50,000
Depreciation of Plant	5,000
Work uncertified	15,000

The above contract contained an escalator clauses which read as follows:

“In the event of prices of materials and rates of wages increase by more than 5% the contract price would be increased accordingly by 25% of the rise in the cost of materials and wages beyond 5% in each case”.

It was found that since the date of signing the agreement the prices of materials and wage rates increased by 25% the value of the work certify does not take into account the effect of the above clause.

Prepare the contract account. Working should form part of the answer.

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2. (a) The budgeted overheads and cost driver volumes of XYZ are as follows.

Cost Pool	Budgeted Overheads (₹)	Cost Driver	Budgeted Volume
Material procurement	5,80,000	No. of orders	1,100
Material handling	2,50,000	No. of movements	680
Set-up	4,15,000	No. of set ups	520
Maintenance	9,70,000	Maintenance hours	8,400
Quality control	1,76,000	No. of inspection	900
Machinery	7,20,000	No. of machine hours	24,000

The company has produced a batch of 2,600 components of AX-15, its material cost was ₹1,30,000 and labor cost ₹2,45,000. The usage activities of the said batch are as follows.

Material orders – 26, maintenance hours – 690, material movements – 18, inspection – 28, set ups – 25, machine hours – 1,800

Calculate – cost driver rates that are used for tracing appropriate amount of overheads to the said batch and ascertain the cost of batch of components using activity Based Costing.

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- (b) SM Ltd. furnished you the following information relating to process B for the month of October, 2012.

1. Opening work-in-progress- NIL
2. Units introduced - 10,000 units @ ₹3 per unit
3. Expenses debited to the process; Direct materials ₹14,650; Labour ₹21,148; Overheads ₹42,000

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4. Finished output - 9,500 units
5. Closing work-in-progress 350 units; Degree of completion : Material 100%; Labour and overheads 50%
6. Normal loss in process- one percent of input
7. Degree of completion of abnormal loss: Material 100% ; Labour and Overheads 80%
8. Units scrapped as normal loss were sold at ` 1 per unit
9. All the units of abnormal loss were sold at ` 2.50 per unit.

Prepare Process B A/c after preparing equivalent production statement. 7

3. (a) Division A is a profit centre that products three products X, Y and Z and each product has an external market.

The relevant data is as:

	X	Y	Z
External market price per unit (`)	48	46	40
Variable cost of production (division A) (`)	33	24	28
Labour hours per unit (division A)	3	4	2
Maximum external sales units	800	500	300

Up to 300 units of y can be transferred to an internal division B.

Division B has also the option of purchasing externally at a price of ` 45 per unit.

Determine the transfer price for Y the total labour hours available in division A is:

- (a) 3,800 hours (b) 5,600 hours 12

- (b) What are the limitations of Break Even Point? 5

4. (a) A and B are two similar plants under the same management who want them to be merged for the better operation. The details are as follows:

	A'	B'
Plant capacity (` In lakhs)	100%	70%
Turnover	200	210
Variable Cost	150	140
Fixed Cost	40	60

Find out: -

- a) The capacity of the merged plant for break-even ?
 b) Turnover from the merged plant to give a profit of ` 20 lakhs 6+6=12

- (b) Define and how do you treat the following items in Cost Accounts

- (i) Scrap
 (ii) Spoilage 5

5. (a) Explain the procedure for appointment of Cost Auditor of the company. 8

- (b) Purchase of Materials ` 5,00,000 (inclusive of Trade Discount ` 8,000); Import Duty paid ` 45,000; Freight inward ` 62,000 ; Insurance paid for import by air ` 28,000; Rebates allowed ` 10,000; Cash discount ` 3,000; CENVAT Credit refundable ` 7,000; Abnormal Loss of Materials ` 14,000; Price variation due to computation of cost under standard rates ` 1,500. Compute the landed cost of material. 9

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

1. (a) Write about Monopolistic Competition and its features? 6
- (b) A firm has revenue function given by $R = 10Q$ where $R =$ Gross Revenue and $Q =$ Number of Units sold, Production Cost function is given by $C = 20000 + 50 (Q / 800)^2$
- Find:
- (i) The total profit function and
- (ii) The number of Units (Q) to be sold to get the maximum profit. 6

2. (a) Demonstrate that the elasticity of demand for the following is constant $x = 3(p^{-2})$. Where P and X are the price and quantity demanded respectively. 6

- (b) Formulate Linear programming model for the following problem.

A company sells two types of products, one is Super and the other is Delux. The Super contains 2 units of chemical A and 4 units of chemical B per jar and the Delux contains 3 units of each of the chemicals A and B per carton. The Super is sold for ` 3 per jar and the Delux 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 Super should the customer purchase to minimize the cost while meeting his requirements?

	Products		Required Units
	Super	Deluxe	
Chemical A	2	3	90
Chemical B	4	3	120
Cost (`)	3/-	4/-	

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3. (a) The total cost function of a firm $C = \frac{x^3}{3} - 5x^2 + 28x + 10$, where C is total cost and ' x ' is the output. A tax @ ` 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. 6

- (b) Find the Elasticity of Demand for the following:

a) $P = \frac{10}{(x + 2)^2}$

b) $P = \frac{4}{(2x + 1)^2}$

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