

PAPER – 10: COST & MANAGEMENT ACCOUNTANCY

MTP_Intermediate_Syllabus 2012_Dec2015_Set 2

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	List	Make a list of	
	What you are expected to know	State	Express, fully or clearly, the details/facts	
		Define	Give the exact meaning of	
		COMPREHENSION	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	

MTP_Intermediate_Syllabus 2012_Dec2015_Set 2

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) Selling price of a product is ₹10 per unit, variable cost is ₹6 per unit and fixed cost is ₹12,000. Then what will be the break-even point in unit?

(b) State the two objectives of Cost Accounting.

(c) A television Company manufactures several component in batches.

The following data relate to one component:

Annual demand	32,000 units
Set up cost/batch	₹120
Annual rate of interest	12%
Cost of production per unit	₹16

Calculate the Economic Batch Quantity (EBQ).

(d) A transport service company is running 4 buses between two towns which are 50 miles apart. Seating capacity of each bus is 40 passengers. The following particulars were obtained from their books for April, 2015.

	₹
Wages of Drivers, Conductors and Cleaners	5,200
Salaries of Office and Supervisory Staff	1,600
Diesel oil and other oil	7,600
Repairs and Maintenance	2,000
Taxation, Insurance etc	3,200
Depreciation	5,200
Interest and Other Charges	2,000
	26,800

Actual passengers carried were 75% of the seating capacity. All the four buses ran on all days of the month. Each bus made one round trip per day. Find out the cost per passenger mile.

(e) The output of three different products A, B, and C in a factory are 15,000 kg, 15,000 kg and 20,000 kg respectively. If the costs totals to ₹ 13,75,000 and are in the proportion of 4:6:7 then what will be the cost per equivalent unit in ₹?

(f) Revised Form CRA-2 has been made available by the Ministry of Corporate Affairs conforming to the Companies (Cost Records and Audit) Rules, 2014 on 31st December, 2014. What are the required attachments to Form CRA-2?

(g) Whether figures are to be provided for Rupees per Unit or Amount in Rupees in the Product and Service Profitability Statement [CRA-3, Part D, Para 1]?

MTP_Intermediate_Syllabus 2012_Dec2015_Set 2

(h) Find the Elasticity of Demand for

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

(i) How is monopoly price related to elasticity of demand?

(j) XYZ Ltd. is operating in a perfectly competitive market. The price elasticity of demand and supply of the product estimated to be 3 and 2 respectively. The equilibrium price of the product is ₹100. If the government imposes a specific tax of ₹10 per unit, what will be the new equilibrium price?

2. Answer any two questions from a, b and c.

[2x20=40]

2(a) (i) PQR Ltd. manufactures four products, namely A, B, C and D using the same plant and process. The following information relates to production period October, 2015:

Product	A	B	C	D
Output in units	1,440	1,200	960	1,008
Cost per unit:				
Direct Materials	₹ 42	₹ 45	₹ 40	₹ 48
Direct Labour	₹ 10	₹ 9	₹ 7	₹ 8
Machine hours per unit	4	3	2	1

The four products are similar and are usually produced in production runs of 48 units per batch and are sold in batches of 24 units. Currently, the production overheads are absorbed using machine hour rate. The production overheads incurred by the company for the period October, 2015 are as follows:

	₹
Machine department costs (rent, depreciation and supervision)	1,26,000
Set-up Costs	40,000
Store receiving costs	30,000
Inspection	20,000
Material handling and despatch	5,184

During the period October, 2015, the following cost drivers are to be used for allocation of overheads cost:

Cost	Cost driver
Set-up Costs	Number of production runs (batches)
Stores receiving	Requisition raised
Inspection	Number of production runs (batches)
Material handling and dispatch	Orders executed

It is also determined that:

(i) Machine department costs should be apportioned among set-up, stores receiving and inspection activities in proportion of 4:3:2.

MTP_Intermediate_Syllabus 2012_Dec2015_Set 2

- (ii) The number of requisitions raised on stores are 50 for each product. The total number of material handling and despatch orders executed during the period are 192 and each order being for a batch size of 24 units of product.

Required:

- (i) Calculate the total cost of each product, if all overheads costs are absorbed on machine-hour rate basis,
(ii) Calculate the total cost of each product using activity-based costing,
(iii) Comment briefly on as to how an activity-based costing might benefit PQR Ltd.

[3+6+1]

- 2(a) (ii)** Q Limited operates a system of standard costing and in respect of one of its products which is manufactured within a single cost centre, the following information is given: For one unit of product the standard material input is 16 litres at a standard price of ₹2.50 per litre. The standard wage rate is ₹5 per hour and 1 unit is produced in 6 hours. Fixed production overhead is absorbed at the rate of 120% of direct wages cost. During the last four-week accounting period the material price variance was extracted on purchase and the actual price was ₹ 2.45 per litre. Total direct wages cost was ₹ 1,21,500. Fixed production overhead incurred was 1,50,000.

Variations:	Favourable	Adverse
Direct material price	₹8,000	
Direct material usage		₹6,000
Direct labour rate		₹4,500
Direct labour efficiency	3,600	
Fixed production overhead expenditure		6,000

- Required:** Calculate for the four-week period : (i) Budgeted output in units (ii) Number of litres Purchased (iii) Number of litres used above standard allowed, (iv) Actual units produced
[1 ½ x 4 =6]

- 2(a) (iii)** Discuss the essential pre-requisites for Integrated Accounts.

[4]

- 2(b) (i)** A company which manufactures and sells three products, furnishes following details for a month:

Product	A	B	C
No. of units budgeted	1,00,000	38,000	46,000
Selling price per unit (₹)	50	80	60
Variable costs per unit (₹)	34	52	24

It has been proposed that an intensive advertisement campaign involving an expenditure of ₹ 1,20,000 per month and reduction of selling prices will increase the sales of the product C as under:

- (i) If selling price is reduced to ₹ 55 per unit, the sales will increase to 59,000 per month.
(ii) If selling price is reduced to ₹ 51 per unit, the sales will increase to 65,000 units per month.

The fixed cost of the company amount to ₹ 34,20,000 per month.

- (i) Calculate the current monthly break even sales value of the company.

MTP_Intermediate_Syllabus 2012_Dec2015_Set 2

- (ii) Evaluate the two proposals and advise which of the proposals should be implemented.
- (iii) Calculate the sales units required per month of product C to justify the expenditure in respect of your decision in (ii) above. [4+3+1]

2(b) (ii) SUNMOON Ltd. produces 2,00,000; 30,000; 25,000; 20,000 and 75,000 units of its five products A, B, C, D and E respectively in a manufacturing process and sells them at ₹ 17, ₹ 13, ₹ 8, ₹ 10 and ₹ 14 per unit. Except product D remaining products can be further processed and then can be sold at ₹ 25, ₹ 17, ₹ 12 and ₹ 20 per unit in case of A, B, C and E respectively.

Raw material costs ₹ 35,90,000 and other manufacturing expenses cost ₹ 5,47,000 in the manufacturing process which are absorbed on the products on the basis of their 'Net realizable value'. The further processing costs of A, B, C and E are ₹ 12,50,000; ₹ 1,50,000; ₹ 50,000 and ₹ 1,50,000 respectively. Fixed costs are ₹ 4,73,000.

You are required to prepare the following in respect of the coming year:

- A. Statement showing income forecast of the company assuming that none of its products are to be further processed.
- B. Statement showing income forecast of the company assuming that products A, B, C and E are to be processed further.
- C. Can you suggest any other production plan whereby the company can maximize its profits? If yes, then submit a statement showing income forecast arising out of adoption of that plan. [4+4]

2(b) (iii) List the benefits of Inter- firm comparison. [4]

2(c) (i) The cost sheet for a company based on budgeted volume of sales of 3,00,000 units per quarter is as under:

Particulars	₹ per unit
Direct Materials	5.00
Direct wages	2.00
Factory overheads (50% fixed)	6.00
S/ Adm overheads (1/3 variable)	3.00
Selling Price	18.00

When the budget was discussed, it was felt that the company would be able to achieve only a volume of 2,50,000 units of production and sales per quarter. The company therefore decided that an aggressive sales promotion campaign should be launched to achieve the following improved operations:

Proposal I:

- Sell 4,00,000 units per quarter by spending ₹ 2,00,000 on special advertising
- The factory fixed costs will increase by ₹ 4,00,000 per quarter.

Proposal II:

- Sell 5,00,000 units per quarter subject to the following conditions.
- An overall price reduction of ₹ 2 per unit is allowed on all sales.
- Variable selling and Administration costs will increase by 5%
- Direct Material costs will be reduced by 1% due to purchase price discounts.
- The fixed factory costs will increase by ₹ 2,00,000 more.

MTP_Intermediate_Syllabus 2012_Dec2015_Set 2

You are required to prepare a flexible budget at 2,50,000 , 4,00,000 and 5,00,000 units of output per quarter and calculate the profit at each of the above levels of output. [7]

2(c) (ii) Z Ltd. has two autonomous divisions: A and B with objective to maximize divisional profits. Divn. A produces X and transfer to Divn. B. B sells X in the external market after incurring processing cost (variable) of ₹ 8 per unit.

The demand of X in the external market varies with the selling price as given below:

Demands in units in a month	Selling price per unit
2,000	50
3,000	45
4,000	40

A incurs variable cost of ₹ 20 per unit of X and fixes Transfer price at ₹ 30 per unit.

- Find divisional contributions and contribution of z Ltd. at the Transfer price of ₹ 30 per unit.
- Examine how the company's profits would change if the Transfer price is changed to ₹ 25 per unit. [3+3]

2(c) (iii) Mention the prerequisites for implementation of Budgetary Control System [7]

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

(a)

(i) A company is engaged in construction of residential housing, offices, industrial units, Roads, Bridges, Marine facilities etc. having sites in India and abroad. The company also has Joint venture projects in India and abroad. Whether Companies (Cost Records and Audit) Rules 2014 would be applicable to the company? [5]

(ii) Who can be appointed as a cost auditor? [3]

(b)

(i) What types of Health Services are covered under the Companies (Cost Records and Audit) Rules 2014? [5]

(ii) Whether separate Form CRA-2 is required to be filed by a company having two or more different types of products covered under cost audit? [3]

(c)

(i) Is there any obligation on the part of cost auditor to report offence of fraud being or has been committed in the Company by its officers or employees? [5]

(ii) Is maintenance of cost accounting records mandatory for a multi-product company where all the products are not covered under the Rules even if the Turnover of the individual product/s that are covered under the Rules is less than rupees thirty five crores? [3]

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

MTP_Intermediate_Syllabus 2012_Dec2015_Set 2

(a)

- (i)** Fit straight line by the least square method to the following figures of production of Sugar Factory. Estimate the production for the year 2015.

Year	2008	2009	2010	2011	2012	2013	2014
Production(in Lakh tons)	76	87	95	81	91	96	90

[5]

- (ii)** State the term Arc Elasticity.

[3]

(b)

- (i)** If 'n' be the no. of workers employed the average cost of production is given by $C = 24n +$

$\left[\frac{3}{2(n-4)} \right]$ Show that $n = 4\frac{1}{4}$ will make C minimum. [4]

- (ii)** How is the price determined by a firm under Oligopoly?

[4]

- (c)** List the factors to be considered while setting the price of a PRODUCT.

[8]

(d)

- (i)** 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 worker, which give maximum efficiency. [3]

- (ii)** Cost = $300x - 10x^2 + \frac{1}{3}x^3$, Calculate

- Output at which Marginal Cost is minimum
- Output at which Average Cost is minimum
- Output at which Marginal Cost = Average Cost.

[1+2+2=5]