

**INTERMEDIATE EXAMINATION
GROUP II
(SYLLABUS 2012)**

**SUGGESTED ANSWERS TO QUESTIONS
DECEMBER 2016**

Paper-10: COST & MANAGEMENT ACCOUNTANCY

Time Allowed : 3 Hours

Full Marks : 100

The figures in the margin on the right side indicate full marks.
All workings must form part of your answer. Assumptions, if any, must be clearly indicated.

- Please:
- (i) Write answers to all parts of a question together.
 - (ii) Open a new page for answer to a new question.
 - (iii) Attempt the required number of questions only.

SECTION – A

(25 Marks)

All questions are compulsory.

1. (a) In a factory weekly demand of a component is 2500 units. Setting up cost per batch is ₹ 400 and manufacturing cost per unit is ₹ 260. If annual carrying cost per unit is 10% of manufacturing cost, calculate Economic Batch Quantity. 2
- (b) Material costs, labour costs and variable overhead costs are ₹ 125, ₹ 150 and ₹ 50 per unit respectively. If the fixed expenses for 20000 units are ₹ 6,40,000 and required rate of return is 25% on transfer price, then find out the transfer price per unit. 2
- (c) The budgeted cost for repairs and maintenance at 30000 and at 33000 units levels are ₹1,45,000 and ₹1,54,000 respectively. If 35000 units are to be produced, how much amount should be budgeted for repairs and maintenance? 2
- (d) In a company, in 2015-16 sales amounted to ₹ 40,00,000 as compared to ₹ 27,00,000 in 2014-15. Profits in 2014-15 were ₹ 2,80,000, which amounted to 35% of the profits of 2015-16. Calculate P/V ratio. 2
- (e) In a production process, normal loss is 10% of input and abnormal gain amounted to 600 units. If final output of the process is 16800 units, find out the quantity of actual loss, if any. 2
- (f) From the following data compute total profit variance: 4

| | | |
|----------------|----------|--------------|
| Budgeted Sales | ₹ 48,000 | (2400 units) |
| Actual Sales | ₹ 55,000 | (2500 units) |
| Actual Cost | ₹ 45,000 | (2500 units) |
| Budgeted Costs | ₹ 38,400 | (2400 units) |

Answer:

1. (a) $EBQ = \sqrt{\frac{2 \times A \times S}{C}}$

A = 2500*52

S = 400

C = 0.1*260 = 26

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$$EBQ = \sqrt{\frac{2 \times 2500 \times 52 \times 400}{26}} = 2000 \text{ units.}$$

(b)

| | ₹ |
|--|-----|
| Per unit variable cost (125+150+50) | 325 |
| Add Fixed expenses per unit (640000/20000) | 32 |
| Total cost per unit | 357 |

Adding Desired return 25% on transfer price (1/3 of cost) = $357 \times 4/3 = 476$

(c) Variable portion = $\frac{154000 - 145000}{33000 - 30000} = \frac{9000}{3000} = ₹ 3 \text{ per unit}$

Fixed portion = $145000 - (30000 \times 3) = ₹ 55,000$

Cost of 35000 units = $55000 + (35000 \times 3) = ₹ 1,60,000.$

(d) Profit for the year 2015-16 = $₹ 280000 \times 100/35 = ₹ 8,00,000.$

P/V ratio = $(\text{Change in Profits}/\text{Change in Sales}) \times 100$

= $[(8,00,000 - 2,80,000)/(40,00,000 - 27,00,000)] \times 100$

= $(5,20,000/13,00,000) \times 100$

= 40%

(e) Let Input be X

Output = Input - normal loss + abnormal gain

Output - abnormal gain = Input - normal loss; or, $16800 - 600 = 90\% \text{ of Input}$

Input = $16200/0.9 = 18000$; Actual loss = Input - Output = $18000 - 16800 = 1200 \text{ units.}$

[Or Normal loss = 1800; Actual loss = Normal loss - Abnormal gain = $1800 - 600 = 1200$]

(f) Budgeted Quantity (BQ) = 2400; Actual Quantity (AQ) = 2500;

Budgeted Selling Price (BSP) = $₹ 48000/2400 = ₹ 20$;

Standard Cost per unit (SC) = $₹ 38400/2400 = ₹ 16$;

Actual Selling Price (ASP) = $₹ 55000/2500 = ₹ 22$;

SR = BSP - SC = ₹ 4;

AR = ASP - SC = ₹ 6;

Total Profit Variance = $AR \times AQ - SR \times BQ = 6 \times 2500 - 4 \times 2400 = ₹ 5400 \text{ (FAV).}$

2. (a) Which Rules govern maintenance of cost accounting records and cost audit as per Section 148 of the Companies Act, 2013? 2

(b) Differentiate between cost accounting policy and cost accounting system. 2

(c) From which date Companies (Cost Record & Audit) Rules 2014 have come into force? 1

Answer:

2. (a) The Central Government issued Companies (Cost Records & Audit) Rules, 2014 on 30-06-2014. It further issued Companies (Cost Records & Audit) Amendment Rules on 31-12-2014. They are now applicable in India and they govern the maintenance of cost accounting records and cost audit as per Section 148 of the Companies Act, 2013.

(b) Cost Accounting Policy of a company state the Policy adopted by the company for treatment of individual cost components in cost determination.

The Cost Accounting System of a company, on the other hand, provides a flow of the Cost Accounting data/information across the activity flow culminating in arriving at the cost of final product/service.

(c) They have come into force from the date of publication in the Official Gazette i.e. 30-06-2014.

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3. (a) Cost function is: $C = \frac{4}{5}x + \frac{16}{5}$, where x is output in units and C is total cost in rupees.
 Calculate variable cost per unit and fixed cost per unit. 2
- (b) A monopolist has demand curve $x = 106 - 2p$ and average cost curve $AC = 5 + x/50$.
 The total revenue is $R = xp$, determine:
 (i) the most profitable output and
 (ii) the maximum profit. 4

Answer:

3. (a) $C = \frac{4}{5}x + \frac{16}{5}$; Total Variable cost = $\frac{4}{5}x$; Total Fixed Cost = $\frac{16}{5}$
 Variable cost per unit = $4/5 = ₹0.80$; Fixed cost per unit = $16/5x$

(b) $x = 106 - 2p$
 $x - 106 = -2p$
 $p = \frac{106 - x}{2}$

$R = p \cdot x = \frac{106x - x^2}{2}$

Total Cost = $C = AC \cdot x = 5x + \frac{x^2}{50}$

$P = \text{Profit} = R - C = \frac{106x - x^2}{2} - 5x - \frac{x^2}{50} \dots\dots\dots (1)$

$\frac{dp}{dx} = \frac{106 - 2x}{2} - 5 - \frac{2x}{50} = 0$

Or, $\frac{dp}{dx} = 53 - x - 5 - \frac{2x}{50} = 0.$

Or, $48 = x + \frac{2x}{50}$

Or, $48 = x(1 + \frac{1}{25})$

Or, $x = 1200 / 26$

$\frac{d^2p}{dx^2} = -26 / 25 < 0.$

Profit is maximum at $x = 1200/26 = 46$ (Approx)
 And, maximum profit amount = 1107.69 [putting $x = 1200/26$ in (1)]

SECTION – B

(15 × 5=75 Marks)

Answer Question no. 4, 5 and 6 and any two from the rest.

4. (a) The total cost function of a monopolist is given by
 $C = 50 + 40x = 50 + 40(x_1 + x_2)$
 The total demand is given by $P = 100 - 2x$
 The demand functions of the segmented market are
 $P_1 = 80 - 2x_1$
 $P_2 = 180 - 10x_2$
 If the price discrimination is practiced by the monopolist, what will be the equilibrium output in each segment and what will be the price? Prove that the market with the higher elasticity will have the lower price. 9
- (b) What are the different methods of demand forecasting? 6

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Answer:

4. (a) $II = R_1 + R_2 - C$

$$R_1 = P_1 * x_1 = (80 - 2x_1) * x_1 = 80x_1 - 2x_1^2$$

$$MR_1 = 80 - 4x_1$$

$$R_2 = P_2 * x_2 = (180 - 10x_2) * x_2 = 180x_2 - 10x_2^2$$

$$MR_2 = 180 - 20x_2$$

$$C = 50 + 40(x_1 + x_2)$$

$$MC = \frac{dc}{dx_1} = \frac{dc}{dx_2} = \frac{dc}{dx} = 40$$

$$MR_1 = MC$$

$$80 - 4x_1 = 40;$$

$$x_1 = (80 - 40) / 4 = 10$$

$$MR_2 = MC$$

$$180 - 20x_2 = 40; x_2 = (180 - 40) / 20 = 7$$

$$X = x_1 + x_2 = 10 + 7 = 17$$

$$P_1 = 80 - 2x_1 = 80 - 20 = 60$$

$$x_1 = 40 - 0.5 P_1$$

$$P_2 = 180 - 10x_2 = 180 - 70 = 110$$

$$x_2 = 18 - 0.1 P_2$$

$$e_1 = (-) \frac{dx_1}{dp_1} * \frac{p_1}{x_1} = 0.5 * 60 / 10 = 3, \text{ when } P_1 = 60$$

$$e_2 = (-) \frac{dx_2}{dp_2} * \frac{p_2}{x_2} = 0.1 * 110 / 7 = 1.57, \text{ when } P_2 = 110$$

Thus proved that the market with higher elasticity ($3 > 1.57$) has a lower price ($60 < 110$).

(b) Demand forecasting method can be broadly categorized into two types:

- (i) Opinion Survey Methods or Qualitative Techniques. The methods adopted are based on subjective assessment
- (ii) Statistical methods or Quantitative Techniques.

The Opinion Survey Methods can further be classified into 3 types, viz.,

- 100% Enumerator Survey, the most direct method of forecasting demands in the short run.
- Delphi Method, a group process and aims at achieving consensus of members, who are experts in the field of marketing research and demand forecasting.
- Sales force opinion Survey or collective opinion of the salesmen regarding expected sales in their territories.

The Statistical Methods can further be classified as

- Simple Average Method
- Moving Average Method
- Weighted Moving Average
- Time Series and
- Linear Trend.

5. (a) What would be the treatment of cost of consumption of electricity from a captive generating plant and applicability of cost audit to such captive generating plants? 4

(b) Under Companies (Cost Records and Audit) Rules, 2014 state what the Form CRA-2 is about and its broad contents. 5

(c) Answer any two of the following: 3×2=6

(i) What constitutes the Cost Records under Rule 2(e)?

(ii) To which companies, requirement for cost audit under Rule 4 shall not apply?

(iii) What are the social objectives of cost audit?

(iv) Who does appoint a cost auditor and within what time limit?

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Answer:

5. (a) Rule 3(A)(2) dealing with generation, transmission, distribution and supply of electricity has excluded captive generation as defined in the Electricity Rules, 2005. It may be noted that in case of a company whose product(s)/service(s) are covered under the Rules and it consumes electricity from the captive generating plant, determination of cost of generation, transmission, distribution and supply of electricity as per CRA-1 would be mandatory since the cost of consumption of electricity has to be at cost. Hence, maintenance of cost records for generation, transmission, distribution and supply of electricity would be applicable. However, cost audit will not be applicable to such captive plants, provided the entire generation is consumed captively and no portion is sold outside.
- (b) Form CRA-2 deals with intimation of appointment of cost auditor by the company to the Central Government.
Following are the broad contents of the form:
1. Information about CIN/FCRN and GLN
 2. General information about the company
 3. Products/Services to which cost audit relates
 4. Details of the cost auditor appointed
 5. Financial year to be covered under the cost audit
 6. Information about change in cost auditor
 7. attachments- copy of Board resolution of the company
- (c) (i) As per Rule 2(e) of the Companies (Cost Records and Audit) Rules, 2014, 'Cost Records' mean 'Books of account relating to utilization of materials, labour and other items of cost as applicable to the production of goods or provision of services as provided in Section 148 of the Companies Act, 2013.
There cannot be any exhaustive list of cost accounting records. Any transaction – Statistical, Quantitative or other details – that has a bearing on the cost of the product/ activity is important and form part of the cost accounting records.
Cost records are to be kept on regular basis to make it possible to "Calculate Per Unit Cost of Production/Operations, Cost of Sales and Margin for each of its products for every financial year on monthly/ quarterly/ half yearly/ annual basis".
What is required is to maintain such records and details in a structured manner on a regular basis so that accumulation is possible on a periodical basis.
- (ii) The requirement of cost audit under Rule 4 shall not apply to a company which is covered in rule 3, and
- whose revenue from exports, in foreign exchange, exceeds 75% of its total revenue; or
 - which is operating from a special economic zone.
- (iii) Social objectives of cost audit:
- Facilitation in fixation of reasonable prices of goods and services produced by the enterprise.
 - Channelizing of the enterprise resources to optimum, productive and profitable areas.
 - Facilitation in settlement of bills in case of cost plus contracts entered into by the Government
- (iv) Under the Companies Act, 2013 cost auditor is to be appointed by the board of directors on the recommendation of the audit committee, where the company is required to have an audit committee.

Every company as specified in rule 3 shall within 180 days of the commencement of every financial year, appoints a cost auditor.

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6. (a) A firm sells its products at ₹ 39 per unit. If its monthly sale amounts to 1000 units, it suffers a monthly loss of ₹ 4,550. If monthly sale amounts to 1500 units, the firm makes a monthly profit of ₹ 1,950. Find BEP in units and find the required sales and MOS in rupees to earn a monthly profit of ₹ 5,850. 6
- (b) Answer any one of the following: 4×1=4
- (i) Assume that for a closed economy, $E = C + I + G$,
 where, E = total expenditure on consumption goods
 I = Expenditure on investment goods
 G = Government spending
 For equilibrium, we must have $E = Y$, Y being total income received.
 For a certain Economy, it is given that $C = 25 + 0.8Y$, where $I = 20 + 0.1 Y$ and $G = 25$. Find the equilibrium value of Y, C and I.
- (ii) State the factors influencing the price of a product.
- (c) Answer any one of the following: 5×1=5
- (i) The demand and supply function under perfect competition are $y = 18 - x^2$ and $y = 2(x^2 + 3)$ respectively. Find the market price and Consumer's surplus.
- (ii) What are the special properties of quadratic production function?

Answer:

6. (a) Contribution per unit = change in profit/change in units = $(1950 + 4550)/(1500 - 1000) = ₹ 13$.

| | |
|---|------------|
| At 1500 units, total contribution = 1500×13 | = ₹ 19,500 |
| Less, Profit | = ₹ 1,950 |
| Fixed cost -19500 -1950 | = ₹ 17,550 |
| BEP in units = Fixed Cost/contribution per unit = $17550/13 = 1350$ units | |
| Required contribution to earn profit of ₹ 5,850 = $5,850 + 17,550 = ₹ 23,400$; | |
| Required sales to earn contribution of 23,400 = $23,400 \times 3 = ₹ 70,200$ | |
| $P/V = 13/39 = 1/3$ | |
| MOS = Profit/(P/V) = $5850/(1/3) = ₹ 17,550$ | |

- (b) Answer **any one** of the following sub-parts:

- (i) For Equilibrium, $E = y$ (i)
 Now, $E = C + I + G$ (ii)
 Where,
 $C = 25 + 0.8Y$
 $I = 20 + 0.1Y$
 $G = 25$
 Putting these in equation (ii)
 $E = 25 + 0.8Y + 20 + 0.1 Y + 25$
 $= 70 + 0.9Y$
 Then at equilibrium
 $E = Y$
 i.e, $70 + 0.9Y = Y$
 $Y - 0.9Y = 70$
 $Y = 700$
 $C = 25 + .8 Y = 585$
 $I = 20 + .1 Y$
 $= 20 + (0.1) \cdot 700 = 90$
 Equilibrium Value of Y =700,
 $C = 585$
 $I = 90$

- (ii) FACTORS INFLUENCING PRICE OF A PRODUCT:
 Generally, marketers consider the following factors in setting price:

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- 1) Target customers: Price of product is depend on the capacity of buyers to buy at various prices, in other words, influence of price elasticity of demand will be examined.
- 2) Cost of the product: Pricing is primarily based on the, how much it costs to produce and market the product, i.e., both production and distribution cost.
- 3) Competition: Severe competition may indicate a lower price than when there is monopoly or little competition.
- 4) The law: Government authorities place numerous restrictions on pricing activities.
- 5) Social responsibility: Pricing affects many parties, including employees, shareholders and the public at large. These should be considered in pricing.
- 6) Market position of the firm: The position of the market may also influence the pricing decision of the firm. It is only why the different producers of identical products sell their products at different prices.
- 7) Distribution channel policy: The prices of products will also depend up the policy regarding distribution channel The longer the channel, the higher would be the distribution costs and consequently higher the prices.
- 8) Price elasticity of Demand: Price elasticity refers to consequential change in demand due to change in price of the commodity. It is the relative responsiveness to the changes in price. As there an inverse relationship between price and demand for product, the demand will increase with fall in price.
- 9) Economic environment: In recession, prices are reduced to a sizeable extend to maintained the level of turnover. On the other hand, prices are charged higher in boom period to cover the increasing cost of production and distribution.

(c) (i) and (ii) any one

- (i) Under perfect competition market price is: demand = supply i.e.

$$18 - x^2 - 2(x^2 + 3) = 0$$

$$18 - x^2 - 2x^2 - 6 = 0$$

$$-3x^2 + 12 = 0$$

$$-3x^2 = -12$$

$$x^2 = 4$$

$$\text{Market price} = x = 2 \text{ (+ve only)}$$

$$Y = 18 - 4 = 14$$

$$\text{Consumer's Surplus} = \int_0^2 (18 - x^2) dx - 14 * 2$$

$$= \left(18x - \frac{x^3}{3} \right) - 28$$

$$= 36 - 8/3 - 28$$

$$= 16/3$$

- (ii) The production may be quadratic, taking the following form:

$$Y = a + bx - cx^2$$

Where the dependent variable, Y, represents total output and the independent variable, X, denotes input.

The small letters are parameters; their probable values of course, are determined by a statistical analysis of the data.

The special properties of the quadratic production function are as under:

- (i) The minus sign in the last term denotes diminishing marginal returns.
- (ii) The equation allows for decreasing marginal product but not for both increasing and decreasing marginal products.

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- (iii) The elasticity of production is not constant at all points along the curve as in a power function, but declines with input magnitude.
- (iv) The equation never allows for an increasing marginal product.
- (v) When $X = 0$, $Y = a$. This means that there is some output even when no variable input is applied.
- (i) The quadratic equation has only one bend as compared with a linear equation which has no bends.

7. (a) The standard cost of a chemical mixture is as follows:

60% material A at ₹ 40 per kg

40% material B at ₹ 60 per kg

A standard loss of 10% of input is expected in production. The cost record for the month of November, 2016 showed the following usage:

1100 kg of material A at a cost of ₹ 49,500

900 kg of material B at a cost of ₹ 50,400

The actual production was 1820 kg of good products.

You are required to calculate:

- (i) Material yield variance**
- (ii) Material mix variance**
- (iii) Material usage variance**
- (iv) Material price variance**
- (v) Material cost variance**

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(b) Distinguish between absorption costing and marginal costing.

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Answer:

7. (a)

| Mat | Standard data | | | Actual data | | |
|-----|---------------|-----------|-------------|-------------|-----------|-------------|
| | Qty | Price (₹) | (2)RSQSP(₹) | Qty | Price (₹) | (4)AQAP (₹) |
| A | 1200 | 40 | 48000 | 1100 | | 49500 |
| B | 800 | 60 | 48000 | 900 | | 50400 |
| | 2000 | | 96000 | 2000 | | 99900 |
| | 200 | | | 180 | | |
| | 1800 | | 96000 | 1820 | | 99900 |

| Mat | SQ for AY | | (1)SQSP | AQ | (3)AQSP |
|-----|--------------------------------------|----|----------|------|---------|
| A | $(1200/1800) \times 1820 = 1213.333$ | 40 | 48533.33 | 1100 | 44000 |
| B | $(800/1800) \times 1820 = 808.8889$ | 60 | 48533.33 | 900 | 54000 |
| | 2022.222 | | 97066.67 | | 98000 |

- (i) Material Yield variance [(1) - (2)]
- (ii) Material Mix variance [(2) - (3)]
- (iii) Material Usage variance [(1) - (3)]
- (iv) Material Price variance [(3) - (4)]
- (v) Material Cost Variance [(1) - (4)]

| | (1)-(2) ₹ | (2)-(3) ₹ | (1)-(3) ₹ | (3)-(4) ₹ | (1)-(4) ₹ |
|---|-----------|-----------|--------------|-----------|--------------|
| A | 533.33 | 4000 | 4533.33 | 5500(ADV) | 966.67(ADV) |
| B | 533.33 | 6000(ADV) | 5466.67(ADV) | 3600 | 1866.67(ADV) |
| | 1066.66 | 2000(ADV) | 933.34(ADV) | 1900(ADV) | 2833.34(ADV) |

(b) Differences between Absorption Costing and Marginal Costing:

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| Absorption Costing | Marginal Costing |
|--|--|
| 1. Both fixed and variable costs are considered for product costing and inventory valuation. | Only variable costs are considered for product costing and inventory valuation. |
| 2. Fixed costs are charged to the cost of production. Each product bears a reasonable share of fixed cost and thus the profitability of a product is influenced by the apportionment of fixed costs. | Fixed costs are regarded as period costs. The profitability of different products is judged by their P/V ratio. |
| 3. Cost data are presented in conventional pattern. Net profit of each product is determined after subtracting fixed cost along with their variable cost. | Cost data are presented to highlight the total contribution of each product. |
| 4. The difference in the magnitude of opening stock and closing stock affects the unit cost of production due to the impact of related fixed cost. | The difference in the magnitude of opening stock and closing stock does not affect the unit cost of production. |
| 5. In case of absorption costing the cost per unit reduces, as the production increases as it is fixed cost which reduces, whereas, the variable cost remains the same per unit. | In case of marginal costing the cost per unit remains the same, irrespective of the production as it is valued at variable cost. |

8. (a) The following information has been extracted from the cost records of a manufacturing company:

| Stores: | | ₹ |
|-------------|--|-----------------|
| | Opening balance | 86,400 |
| | Purchases | 4,60,800 |
| | Transfer from WIP | 2,30,400 |
| | Issue to WIP | 4,60,800 |
| | Issue for Repairs | 57,600 |
| | Deficiency found in stock | 17,280 |
| WTP: | | |
| | Opening balance | 1,72,800 |
| | Direct wages applied | 1,72,800 |
| | Overhead charged | 6,91,200 |
| | Closing balance | 1,15,200 |
| | Finished production: | |
| | Entire production is sold at a profit of 12% on cost of production. | |
| | Wages paid (including indirect wages) | 2,01,600 |
| | Overhead incurred | 7,20,000 |

Draw Store ledger Control Account, WIP Control account, Overhead Control Account and Costing Profit & Loss Account. 9

- (b) State the appropriate costing method and cost units for each of the following industries: 6

- (i) Airlines
- (ii) Chemical
- (iii) Hotels
- (iv) Medicines
- (v) Paper
- (vi) Electricity Supply

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Answer:

8. (a)

Stores Ledger Control a/c

| Particulars | ₹ | Particulars | ₹ |
|-------------------------|----------|----------------------------------|----------|
| Balance b/d | 86,400 | Work in progress Control a/c | 4,60,800 |
| General ledger adj. a/c | 4,60,800 | Overhead Control a/c | 57,600 |
| WIP Control a/c | 2,30,400 | Overhead Control a/c(Deficiency) | 17,280 |
| | | Balance c/d | 2,41,920 |
| | 7,77,600 | | 7,77,600 |

WIP Control a/c

| Particulars | ₹ | Particulars | ₹ |
|---------------------------|-----------|--|-----------|
| Balance b/d | 1,72,800 | Stores ledger Control a/c | 2,30,400 |
| Stores ledger Control a/c | 4,60,800 | Costing Profit and Loss a/c (balancing figure being cost of finished goods) | 11,52,000 |
| Overhead Control a/c | 6,91,200 | | |
| Wages Control a/c | 1,72,800 | Balance c/d | 1,15,200 |
| | 14,97,600 | | 14,97,600 |

Overhead Control a/c

| Particulars | (₹) | Particulars | (₹) |
|---------------------------|----------|-----------------|----------|
| Stores Ledger Control a/c | 57,600 | WIP Control a/c | 6,91,200 |
| Stores ledger Control a/c | 17,280 | | |
| Wages Control a/c | 28,800 | | |
| General ledger adj. a/c | 7,20,000 | Balance c/d | 1,32,480 |
| | 8,23,680 | | 8,23,680 |

Costing Profit & Loss a/c

| Particulars | (₹) | Particulars | (₹) |
|-------------------------|-----------|-------------------------|-----------|
| WIP Control a/c | 11,52,000 | General ledger adj. a/c | 12,90,240 |
| General ledger adj. a/c | 1,38,240 | (1152000* 112%) | |
| | 12,90,240 | | 12,90,240 |

*Indirect Wages = 2,01,600 – 1,72,800 = 28,800

(b)

| Industry | Costing Method | Cost unit |
|--------------------|----------------------|----------------------------|
| Airlines | Operating costing | Per Passenger Per KM |
| Chemical | Process Costing | Per Litre |
| Hotels | Operating Costing | Per Guest Per Room Per Bed |
| Medicines | Batch Costing | Per Batch |
| Paper | Unit/Process Costing | Per Ream |
| Electricity Supply | Operating Costing | Per KW |

9. (a) The cost accountant of a manufacturing company has provided you with the following details for the year 2015:

| | ₹ | | ₹ |
|-----------------------------|-----------------|-----------------------------|-----------------|
| Direct Materials | 1,75,000 | Other Variable Costs | 1,00,000 |
| Direct Wages | 1,00,000 | Other Fixed Costs | 80,000 |
| Fixed Factory O/H | 1,00,000 | Profit | 1,12,000 |
| Variable Factory O/H | 1,00,000 | Sales | 7,50,000 |

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During the year, the company manufactured 2 products A and B and the output and costs were:

| | Product A | Product B |
|--------------------------|-----------|-----------|
| Output (units) | 200000 | 100000 |
| Selling Price/unit (₹) | 2 | 3.50 |
| Direct Material/unit (₹) | 0.50 | 0.75 |
| Direct Wages/unit (₹) | 0.25 | 0.50 |

Variable Factory O/H is absorbed as a % of Direct Wages. Other Variable Costs have been computed as: Product A ₹ 0.25/unit and Product B ₹ 0.30/ unit.

During the year 2016, it is expected that the demand for Product A will fall by 25% and for Product B by 50%. It is decided to manufacture further a Product C, the cost for which is estimated as given below:

| | Product C |
|--------------------------|-----------|
| Output (units) | 200000 |
| Selling Price/unit (₹) | 1.75 |
| Direct Material/unit (₹) | 0.40 |
| Direct Wages/unit (₹) | 0.25 |

It is anticipated that the Other Variable Costs/unit will be same as for Product A. Prepare a budget to present to the management, showing the current position and the position for 2016.

Comment on the comparative results.

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(b) State the cost accounting treatment of rectification of defective work.

3

Answer:

9. (a)

Budget showing current position & position for 2016

(₹)

| | 2015 | | | 2016 | | | |
|-----------------------|--------|--------|----------|--------|--------|--------|----------|
| | A | B | A+B | A | B | C | A+B+C |
| Sales (units) | 200000 | 100000 | - | 150000 | 50000 | 200000 | - |
| (A) Sales | 400000 | 350000 | 750000 | 300000 | 175000 | 350000 | 825000 |
| D. Material | 100000 | 75000 | 175000 | 75000 | 37500 | 80000 | 192500 |
| D. Wages | 50000 | 50000 | 100000 | 37500 | 25000 | 50000 | 112500 |
| F. OH (Var) | 50000 | 50000 | 100000 | 37500 | 25000 | 50000 | 112500 |
| Other Variable Costs | 50000 | 30000 | 80000 | 37500 | 15000 | 50000 | 102500 |
| (B) Marginal Cost | 250000 | 205000 | 455000 | 187500 | 102500 | 230000 | 520000 |
| (C) Contribution(A-B) | 150000 | 145000 | 295000 | 112500 | 72500 | 120000 | 305000 |
| Less Fixed F.OH | | | (100000) | | | | (100000) |
| Other Fixed Costs | | | (80000) | | | | (80000) |
| Profit | | | 115000 | | | | 125000 |

Comments: Introduction of Product C is likely to increase Profit by ₹10,000 in 2016 as compared to 2015.

(b) **Rectification Cost:** In the course of manufacturing/process, mere is likely to be some defective which can be rectified or brought upto the standard by incurring some extra material, labour and overheads. The cost is booked under 'Cost on rectification of defectives or re-processing cost'.

The defectives should be classified under (i) normal (ii) abnormal for the purpose of

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control and treated as:

- (i) Normal defectives - Rectification cost may be treated as part of the product cost if this is identifiable with any specific product or process, otherwise this may be treated as manufacturing overhead.
- (ii) Abnormal defectives - Such defectives should not normally have arisen and therefore, rectification cost is not to be charged in cost accounts but debit to profit and loss account.