



J.K. SHAH[®]
TEST SERIES
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SUGGESTED SOLUTION

CA INTERMEDIATE NOV'19

SUBJECT- COSTING

Test Code - CIM 8313

BRANCH - () (Date :)

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Answer 1:**Process – P Account**

Particulars	Kg.	Amt. (Rs.)	Particulars	Kg.	Amt. (Rs.)
To Input	10,000	50,000	By Normal wastage	1,000	1,000
			(1,000 kg. × Rs. 1)		
To Direct Material	----	38,000	By Process – Q (9,000 kg. × Rs. 15.50)	9,000	1,39,500
To Direct Labour	----	30,000			
To Production OH (Rs. 90,000 × 3/12)	----	22,500			
	10,000	1,40,500		10,000	1,40,500

(2 marks)

$$\text{Cost per unit} = \frac{\text{Rs. } 1,40,500 - \text{Rs. } 1,000}{10,000 \text{ kg.} - 1,000 \text{ kg.}} = \text{Rs. } 15.50$$

(1 mark)**Process - Q Account**

Particulars	Kg.	Amt. (Rs.)	Particulars	Kg.	Amt.(Rs.)
To Process – P A/c.	9,000	1,39,500	By Normal wastage	900	900
			(900 kg. × Rs. 1)		
To Direct Material	----	42,500	By Process – Q	8,200	2,54,200
To Direct Labour	----	40,000	(8,200 kg. Rs. 31)		
To Production OH (Rs. 90,000 × 4 /12)	---	30,000			
To Abnormal Gain (100 kg. × Rs. 31)	100	3,100			
	9,100	2,55,100		9,100	2,55,100

(2 marks)

$$\text{Cost per unit} = \frac{\text{Rs. } 2,52,000 - \text{Rs. } 900}{9,000 \text{ kg.} - 900 \text{ kg.}} = \text{Rs. } 31$$

(1 mark)**Process – R Account**

Particulars	Kg.	Amount	Particulars	Kg.	Amount
To Process – Q A/c.	8,200	2,54,200	By Normal wastage	820	820
To Direct Material	---	42,880	By Abnormal loss	80	4,160
To Direct Labour	---	50,000	By Finished Goods (7,300 kg. × Rs. 52)	7,300	3,79,600
To Production OH (Rs. 90,000 × 5/12)	----	37,500			
	8,200	3,84,580		8,200	3,84,580

(2 marks)

$$\text{Cost per unit} = \frac{\text{Rs. } 3,84,580 - \text{Rs. } 820}{8,200 \text{ kg.} - 820 \text{ Kg.}} = \text{Rs. } 52$$

(1 mark)

Calculation of Selling price per unit of end product :	
Cost per unit	Rs. 52.00
Add : Profit 25% on selling price i.e. 1/3 rd of cost	Rs. 17.33
Selling price per unit	Rs. 69.33

(1 mark)

Answer 2:

- (i) **Statement of profitability of the Oil Mill (After carrying out further processing) for the quarter ending 31st March 20X8.**

Products	Sales Value after further processing	Share of Joint Cost	Additional processing cost	Total Cost after processing	Profit (loss)
ACH	1,72,500	98,667	43,000	1,41,667	30,833
BCH	15,000	19,733	9,000	28,733	(13,733)
CSH	6,000	4,933	--	4,933	1,067
DSH	45,000	24,667	1,500	26,167	18,833
	2,38,500	1,48,000	53,500	2,01,500	37,000

(4 marks)

- (ii) **Statement of profitability at the split off point**

Product	Selling price of split off	Output in units	Sales value at split off point	Share of joint cost	Profit at split off point
ACH	15.00	8,000	1,20,000	98,667	21,333
BCH	6.00	4,000	24,000	19,733	4,267
CSH	3.00	2,000	6,000	4,933	1,067
DSH	7.50	4,000	30,000	24,667	5,333
			1,80,000	1,48,000	32,000

Note : Share of Joint Cost has been arrived at by considering the sales value at split off point.

(4 marks)

Answer 3:

(i) Re - order quantity = $\sqrt{\frac{2AO}{C \times i}}$

$$= \sqrt{\frac{2 \times 7500 \times 12 \times 500}{60 \times 10}}$$

$$= 3,873 \text{ units}$$

- (ii) Re-order level

= Maximum re-order period X Maximum usage

= 8 weeks X 750 units per week

= 6,000 units

- (iii) Minimum stock level

= Re-order level – {Normal usage X Average reorder period}

$$= 6,000 - (500 \times 6.5)$$

$$= 2,750 \text{ units}$$

(iv) Maximum stock level

$$= \text{Re-order level} + \text{Re-order quantity} - (\text{Minimum usage} \times \text{Minimum re-order period})$$

$$= 6,000 + 3,873 - (5 \times 250)$$

$$= 8,623 \text{ units}$$

(v) Average stock level

$$= \frac{1}{2} (\text{Minimum stock level} + \text{Maximum stock level})$$

$$= \frac{1}{2} (2,750 + 8,623)$$

$$= 5,687 \text{ units}$$

(2 marks x 5 = 10 marks)

Answer 4:

Working Note: Let x be the cost of material and y be the normal rate of wage per hour.

Factory Cost of workman Vishnu:

Material cost Rs. x

Wages 60 y

$$\text{Bonus under Rowan System} = \frac{\text{Time saved}}{\text{Time allowed}} \times \text{Hrs. worked} \times \text{Rate per hr.}$$

$$= (40 / 100) \times 60 y = 24 y$$

Overhead, i.e., $60 \times 10 = 600$

$$\text{Factory cost} = x + 60 y + 24 y + \text{Rs. } 600 = \text{Rs. } 7280 \text{ or } x + 84 y = \text{Rs. } 6680 \quad \dots(1)$$

Factory cost of workman Shiva:

Material Rs. x

Wages 80 y

$$\text{Bonus under Halsey Premium Plan} = \text{Hrs. Saved} \times 50 \% \times \text{Rate per hr.}$$

$$= 20 \times 50 \% \times y = 10 y$$

Overhead (80×10) = 800

$$\text{Factory cost} = x + 80 y + 10 y + \text{Rs. } 800 = 7,600 \text{ or } x + 90 y = \text{Rs. } 6,800 \quad \dots(2)$$

From (i) and (ii) value of $y = 20$

∴ Rate per hour Rs, 20

Bonus paid to Vishnu = 24 x Rs. 20 = Rs. 480

Bonus paid to Shiva = 10 x Rs. 20 = Rs. 200

(a) Normal Wages = Rs. 20 per hour as per Working Note above.

(b) The cost of material:

We know that $x + 90y = \text{Rs. } 6,800$

or $x + (90 \times 20) = \text{Rs. } 6,800$ or $x = \text{Rs. } 5,000$

(c) Comparative statement of the factory cost of the product made by the two workmen

	Vishnu	Shiva
Material Cost	Rs. 5,000	Rs. 5,000
Direct Wages 60 x 20	1,200	-
80 x 20	-	1,600
Bonus (See Working Note above)	480	200
Factory Overhead	600	800
Factory Cost	7,280	7,600

(10 marks)

Answer 5:

Material M	Material N
Turnover ratio	Turnover ratio
$= \frac{\text{Cost of Stock of raw material consumed}}{\text{Average stock of raw material}}$ $= \frac{\text{Rs. } 6,00,000 + \text{Rs. } 9,50,000 - \text{Rs. } 4,50,000}{(6,00,000 + 4,50,000)/2} = 2.09$	$= \frac{\text{Cost of stock of raw material consumed}}{\text{Average stock of raw material}}$ $= \frac{\text{Rs. } 10,00,000 + \text{Rs. } 18,40,000 - \text{Rs. } 7,25,000}{(10,00,000 + 7,25,000)/2} = 2.45$
Average number of days for which the average inventory is held	Average number of days for which the average inventory is held
$= \frac{360 \text{ days}}{2.09}$ $= 172.25 \text{ days}$	$= \frac{360 \text{ days}}{2.45}$ $= 146.94 \text{ days}$

(3 marks)

(ii) **Advice**

Comparatively Material M is slower than Material N since Inventory holding period of 'M' is 172.25 days in Comparison to 'N' i.e. 146.94 days. Infact, both materials have slow inventory turnover. Though, different business has their own expected rates for inventory turnover like food shops have fast inventory turnover, shop selling furniture etc. will have slower inventory turnover while manufacturers of large items of plant will have very long inventory turnover.

If it is not as per the Industry Standard, then a slow turnover may indicate that excessive inventory is held and risk of obsolete or spoiled inventory will increase. Large quantity of slow moving material means that capital is locked up in business and not earning revenue. It is advisable to make proper investigations into slow moving materials and take steps to minimize the loss arises therefrom as it may impact overall financial health of the organization.

(2 marks)

Answer 6:

(A)

Objectives of system of material control

The objectives of a system of material control are the following:

- (i) **Minimising interruption in production process** : Ensuring that no activity, particularly production, suffers from interruption for want of materials and stores. It should be noted that this requires constant availability of every item that may be needed howsoever small its cost may be.
- (ii) **Optimisation of Material Cost** : Seeing to it that all the materials and stores are acquired at the lowest possible price considering the quality that is required and considering other relevant factors like reliability in respect of delivery, etc. Holding cost should also require to be minimized.
- (iii) **Reduction in Wastages**: Avoidance of unnecessary losses and wastages that may arise from deterioration in quality due to defective or long storage or from obsolescence. It may be noted that losses and wastages in the process of manufacture, concern the production department.
- (iv) **Adequate Information**: Maintenance of proper records to ensure that reliable information is available for all items of materials and stores that not only helps in detecting losses and pilferages but also facilitates proper production planning.
- (v) **Completion of order in time**: Proper material management is very necessary for fulfilling orders of the firm. This adds to the goodwill of the firm.

(5 marks)

(B)

Direct employee cost	Indirect employee cost
1. It is the cost incurred in payment of employees who are directly engaged in the production process.	1. Cost incurred for payment of employee who are not directly engaged in the production process.
2. Direct employee cost can be easily identified and allocated to cost unit.	2. Indirect employee cost is apportioned on some appropriate basis.

3. Direct employee cost varies with the volume of production and has positive relationship with the volume.

3. Indirect employee cost may not vary with the volume of production.

(2 marks)