

**J.K. SHAH<sup>®</sup>**

**TEST  
SERIES**



**SUGGESTED SOLUTION**

**CA INTERMEDIATE**

**SUBJECT- COST AND MANAGEMENT ACCOUNT**

**Test Code – IMP 2404**

**BRANCH - () (Date :)**

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### MULTIPLE CHOICE QUESTION :

No.	Answer		Marks
1.	D	Activity: Inspection   Cost Driver: Machine hours	2
2.	A	Build, Operate and Transfer	2
3.	A	Cost of packing	2
4.	B	Rs. 6,200	2
5.	C	homogeneous articles are produced on large scale	2
6.	C	Rs. 17.50	2
7.	A	Rs. 60,000	2
8.	B	Quality Control Cost	2
9.	B	Rs. 2,115	2
10.	A	Special job account / Work in Process account	2
11.	C	It ends when targets achieved	1
12.	B	Purchase Requisition Note	1
13.	C	Net sales value at split off	1
14.	D	Costing profit and loss account	1
15.	C	Whether actual activity was more or less than the budgeted capacity	1
16.	B	Fixed overheads. .	1
17.	C	Setting out the budget organization and procedures for preparing a budget including fixation of responsibilities, formats and records required for the purpose of preparing a budget and for exercising budgetary control system	1
18.	A	Theoretical standard	1
19.	C	Variable cost.	1
20.	C	It ends when targets achieved	1

### ANSWER : 1(A)

- (i) Variable Expenses = Rs. 88 Lakhs – Rs. 40 Lakhs = Rs. 48 Lakhs

The Ratio of Variable Expenses and Total Revenue = Rs. 48 Lakhs/Rs. 80 Lakhs = 0.60

Thus, the Contribution Margin Ratio = 1 – 0.60 = 0.40

That is: P/V Ratio = 40%

Break Even Sales (Rs.) = Fixed Cost/ P/V Ratio = Rs. 60 lakhs/40% = Rs. 150 Lakhs

Revised Fixed Cost = Rs. 40 Lakhs + Rs. 20 Lakhs = Rs. 60 Lakhs

- (ii) Computation of sales level to earn a Net Profit of Rs. 4,00,000:

$$\text{Required sales} = \frac{\text{Fixed Expenses} + \text{Target Net Profit}}{\text{P/V Ratio}}$$

$$= \frac{\text{Rs. 60 Lakhs} + \text{Rs. 4 Lakhs}}{40\%}$$

$$= \text{Rs. 160 Lakhs}$$

**(5 MARKS)**

**ANSWER : 1(B)**

(i) Annual consumption = 4,000 × 12 = 48,000

$$EOQ = \sqrt{\frac{2(\text{Annual Demand} \times \text{Cost per Order})}{\text{Annual holding cost per unit}}}$$

$$= \frac{\sqrt{2 \times 48,000 \times \text{Rs.}120}}{\text{Rs.}20 \times 10\%}$$

EOQ = 2,400 units

(ii) **Total cost at EOQ level**

Material Cost	= 48,000 units × Rs. 20	= Rs. 9,60,000
(+) Ordering Cost	= (48,000 units/ 2,400 units) × Rs. 120	= Rs. 2,400
(+) Carrying cost	= (2,400 units/ 2 × Rs. 20 × 10%)	= Rs. 2,400
<b>Total cost</b>		<b>= Rs. 9,64,800</b>

**Total cost when lot size to be supplied is 4,000 units**

Material Cost	= 48,000 units × Rs. 20	= Rs. 9,60,000
(+) Ordering Cost	= (48,000 units/ 4,000 units) × Rs. 120	= Rs. 1,440
(+) Carrying cost	= (4,000 units/ 2 × Rs. 20 × 10%)	= Rs. 4,000
<b>Total cost</b>		<b>= Rs. 9,65,440</b>

Hence, extra cost to be incurred by the company = Rs. 9,65,440 – Rs. 9,64,800 = Rs. 640

(5 MARKS)

**ANSWER : 1(C)**

**Occupancy –**

Room Days :

Single Rooms: 100 rooms x 365 days @ 80% = 29,200

Double rooms: 20 rooms x 365 days @80% = 5,840

\*Equal to 5,840 x 1.25 = 7,300 Single room days

Particulars	Amount (Rs.)	Amount (Rs.)
<u>Costs:</u>		
Variable costs:		
Single Rooms 29,200 x 2200	6,42,40,000	
Double Rooms 5,840 x 3500	<u>2,04,40,000</u>	8,46,80,000
Fixed Cost:		
Single Rooms 29,200 x 1200	3,50,40,000	
Double Rooms 5,840 x 2500	1,46,00,000	4,96,40,000

Total Costs		<b>13,43,20,000</b>
Add: 25% profit on total costs		<b>3,35,80,000</b>
Total Revenue		<b>16,79,00,000</b>

Total Room days = 29200 + 7300 = 36,500

Rent per day for single room = 16,79,00,000/36,500 = Rs. 4,600

Rent per day for Double Room = Rs. 4,600 x 1.25 = Rs. 5,750

**(5 MARKS)**

**ANSWER : 1(D)**

Particulars	Amount (Rs.)
Raw Material Consumed	80,000
Direct Wages	<b>50,000</b>
Factory Overheads	<b>30,000</b>
Factory Cost	<b>1,60,000</b>
Office Overheads	<b>16,000</b>
Cost of Production	<b>1,76,000</b>

Let us assume that Factory Cost is Rs. 100.

Thus, Office Overheads = 10% of 100 = Rs. 10

Therefore, Cost of Production = Rs. 110 which is equal to Rs. 1,76,000 (Given)

Thus, Factory Cost = 1,76,000/110 x 100 = **Rs. 1,60,000**

Thus, Office Overheads = 1,76,000/110 x 10 = **Rs. 16,000**

Now, let us assume that the amount of Direct Wages is 'Y'

So, Factory Overheads = 60% x 'Y' = 0.60Y

Since, Factory Cost = Raw Material Consumed + Direct Wages + Factory Overheads

Thus, Factory Cost = 80,000 + Y + 0.60Y = 80,000 + 1.60Y

$$1,60,000 = 80,000 + 1.60Y$$

$$80,000 = 1.60Y$$

Thus, Y = 80,000/1.60 = Rs. 50,000

Therefore, Direct Wages = **Rs. 50,000**

**(5 MARKS)**

**ANSWER : 2(A)**

**Working note : 1**

Calculation of quantity sold

Opening stock of Finished goods	200 units
Add : Quantity produced	3000 units
(-) Closing stock of Finished goods	(400 units)
Quantity Sold	2800 units

**M/S A LTD.**

**Cost sheet for the month ended 31<sup>st</sup> January, 2023**

Quantity produced : 3000	Working	Total	Per unit
Quantity sold : 2800	(Rs.)	(Rs.)	(Rs.)
<b>RAW MATERIALS CONSUMED</b>			
Opening stock of RM	3000		
Add : Purchases of RM	28,000		
Less : Closing stock of RM	(4500)	26,500	8.83
<b>MANUFACTURING WAGES</b>		7,000	2.33
Prime cost		33,500	11.17
<b>FACTORY OVERHEADS</b>			
Depreciation on plant	1500		
Factory Rent	3000	4500	1.50
Gross / Net works Cost			12.67
Cost of Production		38,000	
<b>Add : Opening stock of Finished goods</b>		2800	-
<b>Less : Closing stock of Finished goods (400 units × 12.67)</b>		(5068)	-
Cost of Goods Sold		35,732	12.76
<b>ADMINISTRATION OVERHEADS (GENERAL)</b>			
Office Rent	500		
General Expenses	400	900	0.32
<b>SELLING &amp; DISTRIBUTION OVERHEADS</b>			
Advertisement Expenses		600	0.21
Cost of Sales	37,232	13.30	
<b>Add : profit (Balancing Figure)</b>		<b>4768</b>	<b>1.70</b>
<b>Sales (2800 units × Rs. 15 per unit)</b>		42000	15.00

**Note :**

- (1) Loss on sale of plant is not recorded in cost sheet as it is a Non – operating expense.
- (2) Discount on sales is not recorded in cost sheet as it is financial expense alternatively, it can also be considered as ‘selling & distribution overheads’.

**(8 MARKS)**

**ANSWER : 2(B)**

(i) Estimated Net Realisable Value Method:

	Buttermilk Amount (Rs.)	ButterAmount (Rs.)
Sales Value	8,40,000	76,80,000

	(Rs. 30 × 28 × 1000)	(Rs. 480 × 16 × 1000)
(Further processing)	-	(1,20,000)
Net Realisable Value	8,40,000	75,60,000
Apportionment of Joint Cost of Rs. 51,00,000* in ratio of 1:9	5,10,000	45,90,000

\* [(Rs.100 × 50 × 1000) + Rs. 1,00,000] = Rs. 51,00,000

(5 MARKS)

**ANSWER : 2(C)**

**Labour Turnover Rate :**

(i) **Replacement Method :**

$$\frac{\text{No. of workers replaced}}{\text{Average no. of workers}} \times 100 = \frac{10}{550} \times 100 = 1.82\%$$

(ii) **Separation Method :**

$$\frac{\text{No. of workers left}}{\text{Average no. of workers}} \times 100 = \frac{5+20}{550} \times 100 = 4.55\%$$

Average number of workers is calculated as under :

$$= \frac{\text{No. of workers at the beginning} + \text{No. of workers at the end of the month}}{2}$$

$$= \frac{500+600}{2} = 550$$

(4 MARKS)

**ANSWER : 3(A)**

(i) Single plant – wide factory overhead rate =  $\frac{\text{Rs.14,00,000}}{1,75,000 \text{ direct labour hours}}$

= Rs. 8 per direct labour hour

Factory overhead cost per unit :

Particulars	Product K	Product L	Product M
Number of direct labour hours (a)	25,000	10,000	1,40,000

Single plant - wide factory overhead rate (b)	Rs. 8/Lab hr	Rs. 8/Lab hr	Rs. 8/Lab hr
Total factory overhead (a x b)	Rs. 2,00,000	Rs. 80,000	Rs. 11,20,000
Number of units	(÷) 10,000	(÷) 2,000	(÷) 50,000
Cost per unit	Rs. 20.00	Rs. 40.00	Rs. 22.40

(ii) Under activity – based costing, an activity rate must be determined for each activity pool :

Activity	Activity Cost Pool Budget	÷	Estimated Activity Base	=	Activity Rate
Setup	Rs. 4,28,750	÷	125 setups	=	Rs. 3,430 per setup
Production Control	Rs. 2,45,000	÷	125 Production Orders	=	Rs. 1,960 per production Order
Quality Control	Rs. 1,83,750	÷	75 inspections	=	Rs. 2,450 per inspection
Materials Management	Rs. 3,67,500	÷	750 requisitions	=	Rs. 490 per requisition
Production	Rs. 1,75,000	÷	1,75,000 direct labourhours	=	Rs. 1 per direct labour hour

These activity rates can be used to determine the activity – based factory overhead cost per unit as follows :

#### Product K

Activity	Activity - Base Usage	× Activity Rate	= Activity Cost
Setup	80 setups	Rs. 3,430	Rs. 2,74,400
Production Control	80 production orders	Rs. 1,960	Rs. 1,56,800
Quality Control	35 inspections	Rs. 2,450	Rs. 85,750
Materials Management	320 requisitions	Rs. 490	Rs. 1,56,800
Production	25,000 direct labour hours	1	<u>Rs. 25,000</u>
Total factory overhead			Rs. 6,98,750
Unit volume			<u>(÷) 10,000</u>
Factory overhead cost per unit			Rs. 69.88

#### Product L

Activity	Activity - Base Usage	× Activity Rate	= Activity Cost
Setup	40 setups	Rs. 3,430	Rs. 1,37,200
Production Control	40 production orders	Rs. 1,960	Rs. 78,400
Quality Control	40 inspections	Rs. 2,450	Rs. 98,000
Materials Management	400 requisitions	Rs. 490	Rs. 1,96,000
Production	10,000 direct labour hours	1	<u>Rs. 10,000</u>

Total factory overhead			Rs. 5,19,600
Unit volume			<u>(÷) 2,000</u>
Factory overhead cost per unit			Rs. 259.80

### Product M

Activity	Activity-Base Usage	× Activity Rate	= Activity Cost
Setup	5 setups	Rs. 3,430	Rs. 17,150
Production Control	5 production orders	Rs. 1,960	Rs. 9,800
Quality Control	0 inspections	Rs. 2,450	0
Materials Management	30 requisitions	Rs. 490	Rs. 14,700
Production	1,40,000 direct labour hours	1	<u>Rs. 1,40,000</u>
Total factory overhead			Rs. 1,81,650
Unit volume			<u>(÷) 50,000</u>
Factory overhead cost per unit			Rs. 3.63

- (iii) Activity-based costing is more accurate, compared to the single plant wide factory overhead rate method. Activity-based costing properly shows that Product M is actually less expensive to make, while the other two products are more expensive to make. The reason is that the single plant wide factory overhead rate method fails to account for activity costs correctly. The setup, production control, quality control, and materials management activities are all performed on products in rates that are different from their volumes. For example, Product L requires many of these activities relative to its actual unit volume. Product L requires 40 setups over a volume of 2,000 units (average production run size = 50 units), while Product M has only 5 setups over 50,000 units (average production run size = 10,000 units). Thus, Product L requires greater support costs relative to Product M. Product M requires minimum activity support because it is scheduled in large batches and requires no inspections (has high quality) and few requisitions. The other two products exhibit the opposite characteristics.

(12 MARKS)

**ANSWER : 3(B)**

**Computation of Machine Hour Rate:**

Particulars	Per Year	Per Hour
	Rs.	Rs.
Standing Charges:		
Wages for operator (Rs. 5,000 x 12)/3	20,000	
Other overheads	<u>10,431</u>	
Total	30,431	



Standing charges Per hour (30,431/2,015)		15.10
Machine Expenses:		
Depreciation [(1,00,000-5,000)/10]/2015		4.71
Repair and maintenance (5,000 x 12)/2,015		2.98
Electricity (10 units @ 50 paise)		5.00
Machine Hour Rate		<b>27.79</b>

**Working Note:**

**Calculation of effective machine hours:**

Total working hours per year (48 x 52)	2,496
Less: 15% maintenance time	375
	2,121
Less: 5% for setting up time	106
Effective time	2,015

**(5 MARKS)**

**ANSWER : 4(A)**

**Working notes :**

Standard Rate of recovery of overhead rate = BOH / BH = Rs. 6,000 / 1,200 hrs. = Rs. 5 (SR)

(1) Overhead expenditure variance = BOH – AOH = 6,000 – 6,400 = 400A

Reconciliation for overheads expenditure variance

Overheads cost variance	=	Exp. Variance	+	volume variance
1,400 A		400 A		1,000 A

(2) Actual Overheads incurred :

SOH = 1,000 hours at Rs. 5 = Rs. 5,000

Overhead Cost Variance = SOH – AOH

1,400 A = 5,000 – AOH

– 1,400 = 5,000 – AOH

OR AOH = 5,000 + 1,400 = Rs. 6,400

(3) Actual hours for Actual production (AH) :

= Actual Overheads incurred / Actual rate of recovery of overheads

= Rs. 6,400 / Rs. 8 = 800 hours. (AH)

(4) Overhead Capacity Variance = SR (BH – AH) = 5 (1,200 – 800) = Rs. 2,000 A.

(5) Overheads Efficiency Variance = SR (SH – AH) = 5(1,000 – 800) = Rs. 1,000 F

Reconciliation :

Volume variance = Capacity Variance + Efficiency Variance

$$1,000 A = 2,000 A + 1,000 F$$

(6) Standard Hours for actual production (SH) :

Volume variance = SR (SH – BH)

$$1,000 A = 5 (SH – 1,200)$$

$$1,000 = 5 SH – 6,000$$

$$\text{OR SH} = (6,000 – 1,000) / 5 = 1,000 \text{ hrs.}$$

(12 MARKS)

**ANSWER : 4(B)**

Flexible Budget is as follows :

Hours	6,000	7,000	8,000	9,000	10,000
Employee's Salaries	28,000	28,000	28,000	28,000	28,000
Indirect repair materials	42,000	49,000	56,000	63,000	70,000
Miscellaneous costs:					
- Variable	9,000	10,500	12,000	13,500	15,000
- Fixed	<u>7,000</u>	<u>7,000</u>	<u>7,000</u>	<u>7,000</u>	<u>7,000</u>
<b>Total Cost</b>	<b>86,000</b>	<b>94,500</b>	<b>1,03,000</b>	<b>1,11,500</b>	<b>1,20,000</b>

**Note : 1**

Miscellaneous costs :

$$\text{Variable cost per unit} = \frac{\text{Change in cost}}{\text{Change in hours}} = \frac{4,500}{3,000} = 1.5 \text{ per hour}$$

$$\text{Variable cost at 6,000 hours} = 6,000 \times 1.5 = 9,000$$

$$\text{Fixed cost} = 16,000 – 9,000 = 7,000$$

(5 MARKS)

**ANSWER : 5(A)**

(i) Statement of Equivalent Production

Input Units	Particulars	Output Units	Material Units	% of Completion	Labour & Overheads Units	% of Completion
200	Opening Stock					
1,050	Units introduced					
	Output:					
	Completion of work					
	On opening stock	200			120	60
	Units introduced and completed	900	900	100	900	100

-----	Closing Stock	150	150	100	105	70
<b>1,250</b>		<b>1,250</b>	<b>1,050</b>		<b>1,125</b>	

(ii) **Statement of Cost of Each Element**

Particulars	Cost	Equivalent	Cost Per
Element of Cost	Rs.	Production	Unit Rs.
Material	3,150	1,050	3
Labour	4,500	1,125	4
Overheads	2,250	1,125	2
<b>Total</b>	<b>9,900</b>		<b>9</b>

(iii) **Statement of Apportionment of Cost**

Particulars	Elements	Equivalent	Cost Per	Cost	Total
		Production	Unit Rs.	Rs.	Rs.
Cost incurred to Complete the work					
On Opening Stock	Material	-	-	-	-
	Labour	120	4	480	720
	Overheads	120	2	240	
Units introduced and Completed	Material	900	3	2700	
	Labour	900	4	3600	8,100
	Overheads	900	2	1800	
Closing Stock	Material	150	3	450	
	Labour	105	4	420	1,080
	Overheads	105	2	210	
					<b>9,900</b>

(9 MARKS)

**ANSWER : 5(B)**

**Service Costing v/s Product Costing:**

Service costing differs from product costing in the following ways due to some basic and peculiar nature.

- (i) Unlike products, services are intangible and cannot be stored, hence, there is no inventory for these services.
- (ii) Use of Composite cost units for cost measurement and to express the volume of outputs.
- (iii) Unlike a product manufacturing, employee cost constitutes a major cost element than material cost.
- (iv) Indirect costs like administration overheads are generally have a significant proportion in total cost of a service as unlike manufacturing sector, service sector heavily depends on support services and traceability of costs to a service may not be economically feasible.

(4 MARKS)

**ANSWER : 6(C)**

**Integrated Accounts** is the name given to a system of accounting, whereby cost and financial accounts are kept in the same set of books. Obviously, then there will be no separate sets of books for Costing and Financial records.

The main **advantages** of Integrated Accounts are as follows:

- (i) No need for Reconciliation – The question of reconciling costing profit and financial profit does not rise, as there is only one figure of profit.
- (ii) Less efforts – Due to use of one set of books, there is a significant saving in efforts made.
- (iii) Less time consuming – No delay is caused in obtaining information as it is provided from books of original entry.
- (iv) Economical process – It is economical also as it is based on the concept of “Centralisation of Accounting function”.
- (v) Relevant information – Integrated accounts provide relevant information which is necessary for preparing profit and loss account and the balance sheet as per the requirement of law and also helps in exercising effective control over the liabilities and assets of its business.

**(4 MARKS)**