

CMA TEST- 10 (Solution)		
Time Allowed: 50 mint.		Total Marks: 30 Marks

Answer to Question no.1:

Meaning and accounting treatment of under- recovery and over- recovery of overheads

- 1) Recovery Rate is always fixed at the beginning of the period on the basis of future expectation. For example, if total cost of ₹ 1,00,000 is desired to be recovered by selling 10,000 units in the next period, in such a case, the recovered rate of ₹ 10 per unit is established at the beginning.
 - 2) However, at the end of the period, we may observe under-recovery due to bad performance and over-recovery due to good performance.
 - 3) Under-recovery means that the less recovery is made from customers (In accounting terms, it means that the expenditure is less credited).
 - 4) Over-recovery means that excess recovery is made from customers (In accounting terms, it means that the expenditure is more credited).
 - 5) **Accounting Treatment:** -
 - Method 1: It may be carried forward for future set-off (Effectively, it means that there is no accounting treatment).
 - Method 2: If under-recovery or over-recovery arises due to abnormal reasons, it is to be transferred to Costing Profit & Loss Account.
 - Method 3: If under-recovery or over-recovery arises due to normal reasons, it is to be transferred to the following three accounts: -
 - (a) Cost of Sales A/C, (b) Finished Goods Control A/C (c) WIP Ledger Control A/C
- Note:** For the purpose of distribution of amount to above mentioned three accounts we take the help of "Supplementary Rate".

Answer to Question no.2:

(i) Direct Labour-Hour Rate Method:

$$\text{Direct Labour Hour Rate} = \frac{\text{Overheads chargeable to the department}}{\text{Labour hours worked}} = \frac{48,000}{24,000} = ₹ 2$$

(ii) Direct Labour Cost Rate Method:

$$\text{Percentage of Direct Labour Cost} = \frac{\text{Overheads for the department}}{\text{Direct wages}} \times 100 = \frac{48,000}{60,000} \times 100 = 80\%$$

(iii) Machine-Hour Rate Method:

$$\text{Machine Hour Rate} = \frac{\text{Overheads for the department}}{\text{Hours of machine operation}} = \frac{48,000}{20,000} = ₹ 2.40$$

Comparative statement of cost of order

Particulars	Direct Labour Hour Rate (i) (₹)	Direct Labour Cost Rate (ii) (₹)	Machine Hour Rate (iii) (₹)
Materials used	4,000	4,000	4,000
Direct Wages	3,300	3,300	3,300
Prime Cost	7,300	7,300	7,300
Factory Overheads: -			
(i) @ ₹ 2 per hr. for 1,650 labour hrs.	3,300		
(ii) @ 80% of ₹ 3,300 Direct labour cost		2,640	
(iii) @ ₹ 2.40 for 1,200 Machine hours			2,880
Works Cost	10,600	9,940	10,180

Answer to Question no.3:

Productive Machine Hours

Total hours in a year	=	3,000 hrs.
(-) <u>Un-productive time</u>		
Repairs & Maintenance	=	<u>400</u> hrs.
Productive Time	=	<u>2,600</u> hrs.

Productive Time is aggregate of: -

(1) Set-up time	=	156 hrs.
(2) Balance Working Time	=	<u>2,444</u> hrs.
Total	=	<u>2,600</u> hrs.

Computation of Machine Hour Rate

Particulars	Total	Per Machine Hr.
Standing Charges		
1) Depreciation [(25,00,000 - 1,00,000)/10]	2,40,000	
2) Insurance (2% of 25,00,000)	50,000	
3) Other Indirect Charges (6,500 x 12)	78,000	
4) Wages (4,000 x 12 x 1/3)	16,000	
5) Lighting (2,500 x 12 x 8/48)	5,000	
Total Standing Charges	3,89,000	3,89,000/2,600
		= 149.62
Machine Running Expenses		
1) Repairs (3,50,000/10)	35,000	13.46
2) Chemical	9,880	3.80
3) Power Cost [(15 units/hr. × ₹ 5/unit) × 2,444 hrs.]	1,83,300	70.50
Machine Hour Rate		237.38

Answer to Question no.4:

A. Computation of Unit Manufacturing Cost (Traditional Method)

Particulars	Equipment Y	Equipment Z
Material Cost Per Unit	₹ 300	₹ 450
Labour Cost	₹ 450	₹ 600
Manufacturing overhead per unit	3 hrs. @ 62.125 = 186.375	4 hrs. @ 62.125 = 248.50
Per Unit Cost	936.375	1298.50

We are given that, Mfg. OH are recovered on the basis of labour Hours. The recovery rate is ascertained below:-

$$\text{Labour Hour Rate} = \frac{\text{Total Mfg.OH to be Recovered}}{\text{Total labour Hours}} = \frac{12,42,500}{20,000} = ₹ 62.125/\text{Lhr.}$$

B. Computation of Unit Manufacturing Cost (ABC Method)

Particulars	Equipment Y	Equipment Z
Material Cost /Unit	₹ 300	₹ 450
Labour Cost / Unit	₹ 450	₹ 600
Manufacturing OH/Unit:		
a) Order Processing	₹ 49	₹28
b) Machine Processing	₹161	₹151.20
c) Inspection	₹16.80	₹36.96
Total Cost / Unit	976.80	1,266.16

Activity 1:- Ordering Process

Cost Pool = 2,10,000

Cost driver = 600 order

$$\text{Recover Rate} = \frac{2,10,000}{600 \text{ order}} = ₹ 350/\text{Order}$$

Cost Allocation:-

$$Y = 350 \times 350 = 1,22,500 \text{ (₹49/unit)}$$

$$Z = 250 \times 350 = 87,500 \text{ (₹28/unit)}$$

Activity 2:- Machine Hours Worked

Cost Pool = 8,75,000

Cost driver = 50,000 Machine Hrs.

Recovery rate = 17.5 / machine hrs.**Cost Allocation:-**

$$Y = 23,000 \times 17.5 = 4,02,500 \text{ (₹161/unit)}$$

$$Z = 27,000 \times 17.5 = 4,72,500 \text{ (₹151.20/unit)}$$

Activity 3:- Inspection

Cost Pool = 1,57,500

Cost driver = 15,000 Inspection Hrs.

Recovery rate = ₹ 10.5 / machine hrs.**Cost Allocation:-**

$$Y = 4,000 \times 10.5 = 42,000 \text{ (₹16.80/unit)}$$

$$Z = 11,000 \times 10.5 = 1,15,500 \text{ (₹36.96/unit)}$$

C. Determination of Under-costed or Over-costed per unit Mfg. cost:-

Particulars	Equipment Y	Equipment Z
Per Unit Mfg. Cost [Traditional Method on the basis of labour hrs.]	936.375	1298.50
Per Unit Mfg. Cost [ABC Method}	976.80	1266.16
Difference	40.425 (Under Costed)	32.34 (Over Costed)