

**Note: All questions are compulsory.**

**Question 1 (5 marks)**

$$\begin{aligned} \text{(i)} \quad \text{EOQ} &= \sqrt{\frac{2AO}{C_i}} \\ &= \sqrt{\frac{(2 \times 62500 \times 8)}{4}} \\ &= 500 \text{ packs (1 mark)} \end{aligned}$$

(ii) Number of orders per year  
= Economic order quantity / Annual requirements = 62500/500 = 125 orders per year  
**(1 mark)**

(iii) Ordering and storage costs **(1 mark)**  
Ordering costs :- 125 orders \* `Rs 8.00 = 1000  
Storage cost :- (500/2) \* (10% of 40) = 1000  
Total cost of ordering & storage = 2000

(iv) Timing of next order **(2 marks)**  
(a) Day's requirement served by each order.  
Number of days requirements = No of working days/ No. of order in a year = 360/300  
= 3.6 days supply  
This implies that each order of 500 packs supplies for requirements of 3.6 days only  
(b) Days requirement covered by inventory  
Units in inventory/Economic order quantity \* (Day requirement served by an order)  
333/500 \* 3.6 days = 2.4 days requirement  
(c) Time interval for placing next order  
Inventory left for day's requirement – Lead time of delivery  
3 day's requirements – 2.4 days lead time = 0.6

**Question 2 (5 marks)**

(a) Working Notes:

(i) Total Productive hours = Estimated Working hours – Machine Maintenance hours  
= 2,200 hours – 200 hours = 2,000 hours **(1 mark)**

(ii) Depreciation per annum =  $\frac{10000-1000}{10 \text{ years}}$  = 900

(iii) Chemical Solution cost per annum = 20 \* 50 weeks = 1000

(iv) Wages of the attendants (per annum) =  $\frac{120 \times 50 \text{ weeks}}{6 \text{ machines}}$  = 1000

**Calculation of Machine hour rate**

Particulars	Amount	Amount
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	(per Annum )	(per hour)
<b>A. Standing Charges (1 mark)</b>		
(i) Wages of attendants	1,000	
(ii) Department and general works overheads	2,000	
Total Standing Charges	3,000	
Standing Charges per hour $\left[ \frac{3,000}{2,000} \right]$		1.5
<b>B. Machine Expenses (2 marks)</b>		
(iii) Depreciation	900	0.45
(iv) Electricity $\left[ \frac{\text{Rs. } 0.09 \times 16 \text{ units} \times 1,900 \text{ hours}}{2,000 \text{ hours}} \right]$	-	1.37
(v) Chemical solution	1,000	0.50
(vi) Maintenance cost	1,200	0.60
<b>Machine operating cost per hour (A+B) (1 mark)</b>		<b>4.42</b>

### Question 3 (8 marks)

#### (i) Re-order quantity (ROQ)(1.5 mark)

Annual consumption of raw material (A) = 72,000 units

Cost of placing an order (O) = Rs.2,250

Carrying cost per unit per annum(c x i) = Rs. 300x 12%=Rs. 36

$$\begin{aligned} \text{Economic Order Quantity (EOQ)/ROQ} &= \sqrt{\frac{2AO}{c \times i}} \\ &= \sqrt{\frac{2 \times 72,000 \text{ units} \times \text{Rs. } 2,250}{\text{Rs. } 36}} = 3,000 \text{ units} \end{aligned}$$

(ii) **Re-order level (ROL)** =Maximum consumption x Maximum lead time  
=400 units x 20 days =8,000 units)(1.5 mark)

(iii) **Minimum Level** =ROL –(Average consumption x Average lead time)  
= 8,000 units –(300 units x 14 days)  
= 3,800 units)(1.5 mark)

(iv) **Maximum Level** =ROL +ROQ –(Minimum consumption x Minimum lead time)  
= 8,000units +3,000units –(200 units x 8 days)  
=9,400 units (1.5 marks)

(v)**Danger level** = Average Consumption x Emergency Delivery Time  
=300 units x 5 days = 1,500 units

Or,  
=Minimum Consumption x emergency Delivery Time

=200 units x 5 days = 1,000 units. (2 marks)

**Question 5 (8 marks)**

**Apportionment of Joint Costs (2 marks)**

Particulars	A(Rs.)	B(Rs.)
Selling Price	16,000	8,000
Less: Estimated profit	4,000	1,600
	(25% of Rs. 16,000)	(25% of Rs. 8,000)
Cost of sales	12,000	6,400
Less :Selling & Distribution exp . (Refer to working note)	267 (Rs.400 x2/3)	133 (Rs.400 x 1/3)
Less :Subsequent cost	5,000	3,000
<b>Share of Joint cost</b>	<b>6,733</b>	<b>3,267</b>

So, Joint cost of manufacture is to be distributed to A & B in the ratio of 6733: 3267

**Statement showing Cost of Production of A and B**

Elovements of cost	Joint Cost (3 marks)		Subsequent Cost (1 mark)		Total Cost(1 mark)	
	A	B	A	B	A	B
Material	3,367	1,633	3,000	1,500	6,367	3,133
Labour	2,020	980	1,400	1,000	3,420	1,980
Overheads	1,346	654	600	500	1,946	1,154
	<b>Cost of Production</b>				<b>11,733</b>	<b>6,267</b>

**Working Note:**

**Calculation of Selling and Distribution Expenses(1 mark)**

Particulars	(Rs.)
Total Sales Revenue (Rs. 16,000+Rs.8,000)	24,000
Less : Estimated profit(Rs. 4,000+Rs. 1,600)	(5,600)
Cost of sales	18,400
Less :Cost of production:	
-Joint Costs	(10,000)
-Subsequent costs (Rs.5,000+Rs.3,000)	(8,000)
<b>Selling and Distribution expenses (Balancing figure)</b>	<b>400</b>

**Question 6 (8 marks)**

**Preparation of Cost Sheet /Cost Statement (3 marks)**

Particulars	Amount (Rs.)
Materials	26,80,000
Wages	17,80,00
Prime Cost	44,60,000
Add : Factory expenses (20% of Rs. 44,60,00)	8,92,000
Factory Cost	53,52,000
Add :Administrative expenses (10% of Rs. 52,52,000)	5,35,200
Cost of Production	58,87,200
Less closing stock $\left( \frac{Rs. 58,87,200}{52,000 \text{ units}} \right) \times 2,000 \text{ units}$	(2,26,431)
Cost of Goods Sold	56,60,769
Add :Selling expenses (Rs. 10 x 50,000 units)	5,00,000

Cost of Sales	61,60,769
<b>Profit (Balancing figure)</b>	<b>39,231</b>
Sales Value	62,00,000

(it has been assumed that administrative expenses are related with production activities )

**Costing Profit and Loss Account (2 marks)**

Particulars	Amount (Rs.)	Particulars	Amount (Rs.)
To Material	26,80,000	By Sales	62,00,000
To Wages	17,80,000	By Closing Stock	2,26,431
To Factory expense	8,92,000		
To Administrative expenses	5,35,200		
To Selling expenses	5,00,000		
To Profit (Balancing figure)	39,231		
	<b>64,26,431</b>		<b>64,26,431</b>

**Reconciliation of profit as per Cost Accounts and as per Financial Accounts (3 marks)**

Particulars	Amount (Rs.)
Profit as per Cost Accounts	39,231
Additions:	
Administrative expenses (Over –absorbed )(Rs. 5,35,200 –Rs.4,80,200)	55,000
Selling expenses (Overcharged )(Rs. 5,00,000 –Rs. 2,50,00)	2,50,000
Dividend received	20,000
	<b>3,64,231</b>
Deductions :	
Factory expenses (Under – absorbed )(Rs. 9,50,000 –Rs.8,92,000)	58,000
Closing stock (Over – valued )(Rs. 2,26,431 –Rs.1,50,000)	76,431
Preliminary expenses written off	50,000
	<b>1,84,431</b>
<b>Profit as per Financial Accounts</b>	<b>1,79,800</b>

(Reconciliation statement may also be prepared by taking financial profit as base.)

**Question 7 (8 marks)**

**Process I A/c (2 Marks)**

Particulars	Total	Cost	Profit	Particulars	Total	Cost	Profit
To Opening Balance	1,50,000	1,50,000	-	By Transfer to Process II A/c	10,80,000	8,10,000	2,70,000
To Direct Materials	3,00,000	3,00,000	-				
To Direct Wages	2,24,000	2,24,000	-				
	6,74,000	6,74,000	-				
Less: Closing Stock	74,000	74,000	-				
Prime Cost	6,00,000	6,00,000	-				
To Factory Overheads	2,10,000	2,10,000	-				
Total Cost	8,10,000	8,10,000	-				
Profit @ 25% on transfer price	2,70,000	-	2,70,000				

	<b>10,80,000</b>	<b>8,10,000</b>	<b>2,70,000</b>		<b>10,80,000</b>	<b>8,10,000</b>	<b>2,70,000</b>
<b>Process II A/c (3 Marks)</b>							
<b>Particulars</b>	<b>Total</b>	<b>Cost</b>	<b>Profit</b>	<b>Particulars</b>	<b>Total</b>	<b>Cost</b>	<b>Profit</b>
To Opening Stock	1,80,000	1,50,000	30,000	By Transfer to Finished Stock A/c	22,50,000	15,15,000	7,35,000
To Transfer from Process I A/c	10,80,000	8,10,000	2,70,000				
To Direct Materials	3,15,000	3,15,000	-				
To Direct Wages	2,25,000	2,25,000	-				
	18,00,000	15,00,000	3,00,000				
Less: Closing Stock	90,000	75,000	15,000				
Prime Cost	17,10,000	14,25,000	2,85,000				
To Factory Overheads	90,000	90,000	-				
Total Cost	18,00,000	15,15,000	2,85,000				
Profit @ 20% on transfer price	4,50,000	-	4,50,000				
	<b>22,50,000</b>	<b>15,15,000</b>	<b>7,35,000</b>		<b>22,50,000</b>	<b>15,15,000</b>	<b>7,35,000</b>
WN - Profit element in closing stock = $3,00,000 / 18,00,000 \times 90,000 = 15,000$							
<b>Finished Stock A/c (3 Marks)</b>							
<b>Particulars</b>	<b>Total</b>	<b>Cost</b>	<b>Profit</b>	<b>Particulars</b>	<b>Total</b>	<b>Cost</b>	<b>Profit</b>
To Opening Stock	4,50,000	2,85,000	1,65,000	By Sales	28,00,000	16,50,000	11,50,000
To Transfer from Process II A/c	22,50,000	15,15,000	7,35,000				
	27,00,000	18,00,000	9,00,000				
Less: Closing Stock	2,25,000	1,50,000	75,000				
Prime Cost	24,75,000	16,50,000	8,25,000				
To Factory Overheads	90,000	90,000	-				
Total Cost	25,65,000	17,40,000	8,25,000				
Profit	3,25,000	-	3,25,000				
	<b>28,90,000</b>	<b>17,40,000</b>	<b>11,50,000</b>		<b>28,00,000</b>	<b>16,50,000</b>	<b>11,50,000</b>
WN - Profit element in closing stock = $9,00,000 / 27,00,000 \times 2,25,000 = 75,000$							

Profit on Sale							
	Amount	Amount					
Process I		2,70,000					
Process II	4,50,000						
Add: Profit Provision	15,000	4,65,000					
Finished Stock	3,25,000						
Add: Profit Provision	90,000	4,15,000					
		<b>11,50,000</b>					

Question 8 (8 marks)(1/2 mark for each entry)

**Store Ledger Account**  
For the three months ending 30<sup>th</sup> June, 2014  
(Weighted Average Method)

Date	Receipt				Issues				Balance		Rate for further Issues (Rs.)
	GRN No.PR No.	QTY. (Kg.)	Rates (Rs.)	Amount	MR No.	Qty. (Kg.)	Rates (RS.)	Amount (Rs.)	Qty (kg)	Amount	
2014											
April 1									1,500	7,200	4.80
April 4						1,100	4.80	5,280	400	1,920	4.80
April 10		1,600	5.00	8,000					2,000	9,920	$\frac{9,920}{2,000}=4.96$
April 20		2,400	4.90	11,760					4,400	21,680	$\frac{21,680}{4,400}=4.93$
April 24						1,600	4.93	7,888	2,800	13,792	$\frac{13,792}{2,800}=4.93$
May 5		1,000	5.10	5,100					3,800	18,892	$\frac{18,892}{3,800}=4.97$
May 10						1,500	4.97	7,455	2,300	11,437	$\frac{11,437}{2,300}=4.97$
May 17		1,100	5.20	5,720					3,400	17,157	$\frac{17,157}{3,400}=5.05$
May 25		800	5.25	4,200					4,200	21,357	$\frac{21,357}{2,500}=5.09$
May 26						1,700	5.09	8,653	2,500	12,704	$\frac{12,704}{32,500}=5.09$
May 31					Shortage	80			2,420	12,704	$\frac{12,704}{2,420}=5.25$
June 11		900	5.40	4,860					3,320	17,564	$\frac{17,564}{3,320}=5.229$
June 15						1,500	5.29	7,935	1,820	9,629	$\frac{9,629}{1,820}=5.29$
June 21						1,200	5.29	6,348	620	3,281	$\frac{3,281}{620}=5.29$
June 24		1,400	5.50	7,700					2,020	10,981	$\frac{10,981}{2,020}=5.44$
June 30					Shortage	60			1,960	10,981	$\frac{10,981}{1,980}=5.60$

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