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SUGGESTED SOLUTION

IPCC MAY 2017 EXAM

COSTING AND FINANCIAL MANAGEMENT

Test Code - I M J 7 1 3 3

BRANCH - (MULTIPLE) (Date : 18.12.2016)

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Answer-1 :

Process X Account

	Units	Amount Rs.		Units	Amount Rs.
Material Introduced @ Rs. 6 per unit	1,000	6,000	Normal Loss Transferred	50	200
Material		5,200	Process Y @ Rs. 20 per unit	950	19,000
Direct Wages		4,000			
Production Overheads		4,000			
	1,000	19,200		1,000	19,200

(1 Mark)

Process Y Account

	Units	Amount Rs.		Units	Amount Rs.
Transferred from Process X	950	19,000	Normal Loss Abnormal Loss	95	760
Material		3,960	Transferred to next Process @	15	600
Direct Wages		6,000	Rs. 40 pre unit	840	19,000
Production Overheads		6,000			
	950	34,960		950	34,960

(1 Mark)

Process Z Account

	Units	Amount Rs.		Units	Amount Rs.
Transferred from Process Y	840	33,600	Normal Loss Transferred to	126	1,260
Material		5,924	next Process @		
Direct Wages		8,000	Rs. 40 pre unit	750	57,000
Production Overheads		8,000			
Abnormal Gain @ Rs.76 per unit	36	2,736			
	876	58,260		876	58,260

(1 Mark)

Abnormal Loss Account

	Rs.		Rs.
To Process Y	600	By Cash (sale of Scrap of Abnormal Loss units)	120
		By Costing Profit And Loss A/c	480

600		600	
(1 Mark)			
Abnormal Gain Account			
Rs.		Rs.	
To Process Z A/c.	360	By Process Z A/c	2,736
To Costing Profit & Loss Account	2,376		
2,736		2,736	
(1 Mark)			

Working Note

Process Y:

- (a) Normal Loss $950 \times \frac{10}{100} = 95$ Units
 Scrap Value $95 \times 8 = \text{Rs. } 760$
- (b) Abnormal Loss Units
 Normal Production $950 - 95$ 855
 Actual Production 840
 Abnormal Loss 15
- (c) Cost of Normal Production. $34,960 - 760 = 34,200$
 Cost of Normal Production per unit $\frac{34,200}{845} = \text{Rs. } 40$ per unit
 Cost of Abnormal Loss $40 \times 15 = 600$

(1.5 Marks)

Abnormal Loss has been credited with Rs.120 being the amount realised from the sale of scrap and Abnormal Loss.

Process Z:

- (a) Normal Process. 15% of 840 units.
 $= \frac{840 \times 15}{100} = 126$ units
 Sale of scrap $= 126 \times \text{Rs. } 10 = \text{Rs. } 1,260$.
- (b) Abnormal Gain. Units
 Actual Production 750
 Estimated Production 714
 36

The Cost of Abnormal Gain has been calculated in the usual way.

Abnormal Gain A/c has been debited with Rs.360 being less amount, recovered on the sale of loss of units which were 90 units instead of normal 126 units.

i.e., $36 \times 10 = \text{Rs. } 360$.

(1.5 Marks)

Answer-2 :

- (1) Economic Order Quantity = $\sqrt{\frac{2AB}{S}}$
- A = Annual Consumption
 B = Buying Cost per order
 S = Storage and Carrying cost

$$A \text{ (Annual requirement of Raw materials in kgs)} = \frac{1 \text{ kg} \times 1,00,000 \text{ units}}{2.5 \text{ units}} = 40000 \text{ kg.}$$

$$S \text{ Carrying Cost and Storage Expenses} = (0.5 \times 12) + \text{Rs.}9 = \text{Rs.} 15 \text{ per unit}$$

$$B \text{ Buying Cost per order} = \text{Rs.} 360 = \text{Rs.} 390 = \text{Rs.}750$$

$$EOQ = \sqrt{\frac{2 \times 40,000 \times 750}{15}} = 2000 \text{ kgs}$$

(2 Marks)

(2) Annual Consumption = 40000 kgs
Quantity per order = 2000 kgs
No. of orders = $\frac{40,000}{2,000} = 20$ orders in 12 months
Frequency = $\frac{12 \text{ months}}{20 \text{ orders}} = 0.6$ months
(or) = $\frac{365 \text{ months}}{20 \text{ orders}} = 18$ days (approx.)

(2 Marks)

(3) Quarterly Orders = $\frac{40,000 \text{ kgs}}{4 \text{ orders}} = 10,000$ kgs per order
No. of orders = $\frac{40,000}{10,000} = 4$ orders

Total Cost:	Rs.
Order Placing Cost (4 x 750)	3,000
Carrying Cost = $\frac{10,000}{0.5 \times 4} \times 15$	<u>75,000</u>
	<u>78,000</u>

(2 Marks)

Total Cost of EOQ :

No. of Orders	=	20	Rs.
Order Placing Cost (20 x 750)	=		15,000
Carrying Cost = $\frac{2,000}{0.5 \times 4} \times 15$	=		<u>15,000</u>
			<u>30,000</u>

Increase in cost to be compensated by discount:

Total Cost	=	Rs. 78,000
Total Cost EOQ	=	<u>Rs. 30,000</u>
Increase in Cost		<u>Rs.48,000</u>
Price of discount per unit	=	$\frac{48,000}{40,00 \text{ kg}} = \text{Rs.}1.20 \text{ per uni}$

$$\text{Percentage of discount in the prices of raw materials} = \frac{\text{Rs.}1.20}{60} \times 100 = 2\% \text{ discount}$$

(2 Marks)

Answer-3 :

Calculation of Price of the Delhi-Jaipur-Agra-Delhi tour package

Particulars	Amount (Rs.)	Amount (Rs.)
Diesel Cost (Working Note-2)		2,635.00

Servicing Cost $\left(\frac{\text{Rs.}30,000}{50,000 \text{ kms}} \times 754 \text{ kms.} \right)$		452.40
Chauffeur's meal cost (three 200 km. completed journey x Rs.50)		150.00
Other Allocable Costs :		
Depreciation $\left(\frac{\text{Rs.}12,00,000}{24,00,000 \text{ kms}} \times 754 \text{ kms.} \right)$	377.00	
Other set-up and office cost $\left(\frac{\text{Rs.}2,400}{30 \text{ days}} \times 3 \text{ days} \right)$	240.00	
Chauffeur's Salary $\left(\frac{\text{Rs.}12,000}{30 \text{ days}} \times 3 \text{ days} \right)$	<u>1,200.00</u>	<u>1,817.00</u>
Total Cost		<u>5,054.40</u>
Add : Profit (25% of net takings or 1/3 rd of total cost)		<u>1,684.80</u>
		6,739.20
Add : Service Tax @ 12.36%		<u>832.97</u>
Price of the package (inclusive of service tax)		<u>7,572.17</u>
		(6 Marks)

Working Notes :

(1) Total distance of journey

From	To	Distance (Km.)
Delhi	Jaipur	274
Jaipur	Agra	238
Agra	Delhi	<u>242</u>
Total Distance		<u>754</u>

(1 Mark)

(2) Cost of Diesel

From	To	Distance (in Km.)	Price of diesel per litre (Rs.)	Total diesel Cost (Rs.)
I	II	III	IV	V = (III + 16 km) x IV
Delhi	Jaipur	274	54	924.75
Jaipur	Agra	238	56	833.00
Agra	Delhi	242	58	<u>877.25</u>
				<u>2635.00</u>

(1 Mark)

Answer-4 :

Working Notes:

1.

	(Kg.)
Material Input	1,50,000
Less: Loss of Material in process (5% of 1,50,000 kg.)	7,500
Total output	1,42,500

(1 Mark)

2. Output of P and Q are in the ratio of 1:2 of the total output:

$$P = \frac{1,42,500 \text{ kg} \times 1}{3} = 47,500 \text{ kg.}$$

$$Q = \frac{1,42,500 \text{ kg} \times 2}{3} = 95,000 \text{ kg.}$$

(1 Mark)

3. Joint Costs:

	(Rs.)
Material (input) (1,50,000 kg. x Rs. 12)	18,00,000
Direct materials	90,000
Direct Wages	1,20,000
Variable overheads	1,00,000
Fixed overheads	1,00,000
	22,10,000

(1 Mark)

4. Sales Revenue of P, Q and S

P = 47,500 Kg. x Rs. 12 = Rs.5,70,000

Q = 95,000 Kg. x Rs. 20 = Rs. 19,00,000

S = 47,500 Kg. x Rs. 15 = Rs.7,12,500.

(1 Mark)

5. Apportionment of joint costs viz. Rs. 22,10,000 over P and Q in proportion of their sales value i.e. Rs. 5,70,000 and Rs. 19,00,000, i.e., 3 :10 is:

	Total (Rs.)	P (Rs.)	Q (Rs.)
Joint cost apportionment	22,10,000	5,10,000	17,00,000
In the ratio of 3:10		$\left(\frac{\text{Rs.}22,10,000 \times 3}{13} \right)$	$\left(\frac{\text{Rs.}22,10,000 \times 10}{13} \right)$

(1 Mark)

6. Total Cost of 47,500 kg. of S = Joint Cost of P + Cost of Processing P into S.
= Rs. 5,10,000 + Rs. 1,85,000 = Rs. 6,95,000.

Statement showing the Monthly Profitability

	Based on existing manufacturing operations			Based on further processing of P into S		
	Products		Total	Products		Total
	P	Q		S	Q	
Sales quantity (kg.)	47,500	95,000	1,42,500	47,500	95,000	1,42,500
	(₹)	(₹)	(₹)	(₹)	(₹)	(₹)
Sales Revenue (Working Note 4)	5,70,000	19,00,000	24,70,000	7,12,500	19,00,000	26,12,500
Less: Joint Costs (Working Note 5)	5,10,000	17,00,000	22,10,000	6,95,000*	17,00,000	23,95,000
Profit	60,000	2,00,000	2,60,000	17,500	2,00,000	2,17,500

* Working Note 6

Recommendation : Further processing of P is not recommended as it results in a lower profit of P.

(3 Marks)

Answer-5 :

Total hours 60 workers x 40 = 2400 hours

Output = 8 units per hour

Hours required = $\frac{(2400 \times 8)}{8 \text{ hours}} = \frac{19,200 \text{ units}}{8 \text{ hours}} = 2400 \text{ hours}$

Standard hours allowed = $\frac{19,200 \text{ units}}{6 \text{ hours}} = 3,200 \text{ hours}$

Time Saved = 3200 - 2400 = 800 hours

$$\text{Rate per hour} = \frac{\text{Rs.400}}{40 \text{ hours}} = \text{Rs.10}$$

(3 Marks)

Bonus

$$\begin{aligned} \text{Halsey Scheme} &= 50\% \text{ of Time Saved} \\ \text{Bonus} &= 50\% \text{ of Time Saved} \\ &= \frac{800}{2} = 400 \text{ hrs.} \times \text{Rs. } 10 = \text{Rs. } 4000 \end{aligned}$$

Rowan Scheme

$$\begin{aligned} \text{Bonus} &= \frac{\text{Time Saved}}{\text{Std. Hours}} \times \text{Actual Hours} \times \text{Hourly Rate} \\ &= \frac{800 \text{ hours}}{3200 \text{ hours}} \times 2400 \text{ hrs.} \times 10 = \text{Rs. } 6000 \end{aligned}$$

(2 Marks)

Comparative Statement

Particulars	Present Rs.	Halsey Rs.	Rowan Rs.
Sales 19200 units x Rs. 11	2,11,200	2,11,200	2,11,200
Direct Materials (19200 units x Rs. 8)	1,53,600	1,53,600	1,53,600
$\left[\frac{19,200 \text{ units}}{6} = \frac{3200 \text{ hours} \times \text{Rs.10}}{2400 \text{ hours} \times \text{Rs.10}} \right]$	32,000	24,000	24,000
Overtime 800 hrs. x Rs. 5	4,000		
Bonus	—	4,000	6,000
Variable overheads (3200 hrs x Rs. 0.50 2400 hrs x Rs. 0.50)	1,600	1,200	1,200
Fixed Overheads	9,000	9,000	9,000
	2,00,200	1,91,800	1,93,800
Profit	11,000	19,400	17,400

(3 Marks)

Answer-6 :

Preparation of Monthly Cash Budget

Cash Budget for four months from June, 2014 to September, 2014

Particulars	June (Rs.)	July (Rs.)	August (Rs.)	September (Rs.)
Opening Balance	45,000	45,500	45,500	45,000
Receipts:				
Cash Sales	1,00,000	98,000	1,08,000	1,22,000
Collection from debtors	3,48,000	3,80,000	3,96,000	4,12,000
Dividends	25,000	-	-	-
Total (A)	5,18,000	5,23,500	5,49,500	5,79,000
Payments:				
Creditors for Materials	2,00,000	2,10,000	2,60,000	2,82,000
Wages	1,62,500	1,65,000	1,65,000	1,67,500
Overheads	40,000	38,000	37,500	60,800
Installment for Machine	-	20,000	20,000	20,000
Interest on Debentures	30,000	-	-	-
Advance Tax	-	-	15,000	-
Total (B)	4,32,500	4,33,000	4,97,500	5,30,300
Surplus (A – B)	85,500	90,500	52,000	48,700
Fixed Deposits	40,000	45,000	7,000	3,000
Closing Balance	45,500	45,500	45,000	45,700

(7 Marks)

Working Notes:

(1) Cash Sales and Collection from Debtors:

Month	Total Sales (Rs.)	Cash Sales (Rs.)	Credit Sales (Rs.)	Collection from Debtors			
				June (Rs.)	July (Rs.)	August (Rs.)	September (Rs.)
April, 2010	4,20,000	84,000	3,36,000	1,68,000	-	-	-
May, 2010	4,50,000	90,000	3,60,000	1,80,000	1,80,000	-	-
June, 2010	5,00,000	1,00,000	4,00,000	-	2,00,000	2,00,000	-
July, 2010	4,90,000	98,000	3,92,000	-	-	1,96,000	1,96,000
Aug., 2010	5,40,000	1,08,000	4,32,000	-	-	-	2,16,000
Sept., 2010	6,10,000	1,22,000	4,88,000	-	-	-	-
			Total	3,48,000	3,80,000	3,96,000	4,12,000

(2 Marks)

(2) Payment of Wages

June = 80,000 + 82,500 = 1,62,500;

July = 82,500 + 82,500 = 1,65,000;

Aug. = 82,500 + 82,500 = 1,65,000; and

Sept. = 82,500 + 85,000 = 1,67,500.

(Note: It has been assumed that the company wants to keep minimum cash balance of Rs.45,000.)

(1 Mark)