Solutions

Q. 1. (b) (<i>Or</i> Part)							
(i) Economic Order Quantity	Economic Order Quantity (EOQ) or Re-order Quantity = $\sqrt{\frac{2 \text{ AO}}{T}}$						
Where, A = Annual usa O = Cost of pla I = Annual car	nge = 50 un cing an orc rying cost	iits × 52 wee der = ₹100 (per unit) =	₹15				
\therefore Re-order Quantity = $\sqrt{\frac{2}{3}}$	2 × 2,600 × ₹15	₹100 = √₹	1,04,000 ₹3 = √34,666.67				
= 180	5.19 units (or 186 units	(app.)				
(ii) Re-order Level = Maximi = 75 × 6 =	um usage > = 450 units	< Maximum	Re-order period				
(iii) Minimum Level = Re-orde	er Level – (Normal/Ave	erage consumption × Normal/Average R	e-order perio	od)		
= 450 - (5	50 × 5) = 45	50 – 250 = 2	00 units				
Average Re-order period =	$=\frac{4+6}{2}=5$	weeks					
(iv) Maximum Level = Re-orde	er Level + F	Re-order Qu	antity – (Minimum usage × Minimum re	eorder period	I)		
= 450 + 1	86 – (25 ×	4) = 636 – 1	00 = 536 units				
(v) Average Stock Level = Min	nimum Lev	el + Maxim	um Level				
200		2					
$=\frac{200}{200}$	$\frac{1}{2} = \frac{1}{2}$	$\frac{736}{2}$ = 368 u	nits				
or Average Stock Level = I	Z Minimum I	$\frac{1}{2}$	Re-order Quantity)				
	1	2	le order edunity				
= 2	$\frac{200}{2} + \frac{-}{2} (1)$.86) = 200 +	93 = 293 units				
Q. 2. (a) <i>Dr.</i>		Process	A Account		Cr.		
Particulars	Units	₹	Particulars	Units	₹		
To Units Introduced A/c	5,000	2,500	By Normal Loss A/c (250 × ₹8/100)	250	20		
To Materials Consumed A/c		3,000	By Abnormal Loss A/c	50	105		
To Wages A/c		3,500	By Transfer to Process B A/c	4,700	9,875		
To Manufacturing Expenses A/c		1,000					
	5,000	10,000		5,000	10,000		
Working Notes:							
1. Normal Loss (5%) = 5,000 × $\frac{5}{100}$ =	250 units						
2. Abnormal Loss = Input – Normal Lo	oss units –	Output = 5,	000 – 250 – 4,700 = 50 units				
∴ Value of Abnormal Loss = $\frac{₹(10)}{(5,000)}$	0,000 – 20)) – 250) un	— × 50 uni its	ts = ₹9,980 4,750 units × 50 units = ₹105				
Dr		Process F	8 Account		Cr		

J. Process & Account				Cr	
Particulars	Units	₹	Particulars	Units	₹
To Process A A/c	4,700	9,875	By Normal Loss A/c (470 × ₹10/100)	470	47
To Materials Consumed A/c		1,500	By Abnormal Loss A/c	80	271
To Wages A/c		2,000	By Transfer to Finished Stock A/c	4,150	14,057
To Manufacturing Expenses A/c		1,000			
	4,700	14,375		4,700	14,375

Working Notes:

- 1. Normal Loss (10%) = 4,700 × 10% = 470 units
- 2. Abnormal Loss = Input Normal Loss units Output = 4,700 470 4,150 = 80 units

∴ Value of Abnormal Loss =
$$\frac{\overline{(14,375-47)}}{(4,700-470) \text{ units}} \times 80 \text{ units} = \frac{\overline{14,328}}{4,230} \times 80 = \overline{14,328} \times 80 = \overline{14,328}$$

Q. 2. (b) Economic Order Quantity (EOQ) = $\sqrt{\frac{2 \text{ AO}}{I}}$ Where, A = Annual usage; 500 units × 12 months = 6,000 units

EOQ =
$$\sqrt{\frac{2 \times 6,000 \times ₹30}{₹4}} = \sqrt{\frac{₹3,60,000}{₹4}} = \sqrt{90,000} = 300$$
 units

No. of orders per year =
$$\frac{6,000 \text{ units}}{300 \text{ units}}$$
 = 20 orders

Time lag between two orders = $\frac{365 \text{ days}}{20 \text{ orders}}$ = 18 days

= Distance covered in one trip × Trips made by each bus per day (c) (i) Total Kilometers × Days operated in a month × No. of Buses = 100 × 2 × 2 × 30 × 4 = 48,000 km 80% 18 000 kr (ii) T

Statement of Equivalent Production

	Output		Equivalent Units					
Input (Upits)		Units	Material		Labour		Overhead	
(011103)	items		Qty.	%	Qty.	%	Qty.	%
2,000	Units introduced		_	_	-	_	_	
	Units finished	1,500	1,500	100	1,500	100	1,500	100
	Work-in-Progress	500	500	100	300	60	150	30
2,000	Total	2,000	2,000		1,800		1,650	

Cost per unit (₹)
9
5
4
18

(iii)		Statement of Evaluation	
		Particulars	₹
Finished output (1,500 units @ ₹18)		27,000	
Work-in-Progress:			
Material	500 units @ ₹9		4,500
Labour	300 units @ ₹5		1,500
Overhead	150 units @ ₹4		600
		Total	6,600

(iv) <i>Dr.</i>		Process A		Cr.	
Particulars	Units	₹	Particulars	Units	₹
To Materials	2,000	18,000	By Process B	1,500	27,000
To Labour		9,000	By Transfer to WIP	500	6,600
To Manufacturing Overheads		6,600			
	2,000	33,600		2,000	33,600

Or

Q. 3.(a) This solution is not as per the Cost Accounting Standards.

Dr. C	osting Profit an	d Loss Account	Cr.
Particulars	₹	Particulars	₹
To Direct Materials	2,80,000	By Sales	7,00,000
To Direct Wages	1,00,000	By Net Loss	4,22,000
Prime Cost	3,80,000		
To Factory Overheads @20%	76,000		
	4,56,000		
Less: Work-in-Progress	(80,000)		
Factory Cost	3,76,000		
To Administration Overheads	4,80,000		
Cost of Production	8,56,000		
Less: Closing Stock of Finished Goods	(2,14,000)		
Cost of Goods Sold	6,42,000		
To Selling Overheads (1,20,000 × ₹4)	4,80,000		
	11,22,000	1	11,22,000

Working Note:

1. Closing Stock of Finished Goods = $\frac{\overline{\$8,56,000}}{1,60,000 \text{ units}} \times 40,000 \text{ units} = \overline{\$2,14,000}$

(b) <i>Dr.</i>	Financial Profit a	Cr.		
Particulars	₹	Particulars		₹
To Direct Materials	2,50,000	By Sales		7,00,000
To Direct Wages	1,00,000	By Dividends Received		50,000
To Factory Overheads	3,80,000	By Interest on Deposit Received		10,000
To Administration Overheads	2,50,000	By Closing Stock:		
To Selling & Distribution Overheads	4,80,000	Finished Stock	1,20,000	
To Bad Debts	20,000	Work-in-Progress	80,000	2,00,000
To Preliminary Expenses	10,000	By Net Loss		5,35,000
To Legal Charges	5,000			
	14,95,000			14,95,000

Reconciliation Statement

Particulars	₹	₹
Net Loss as per Costing Profit and Loss Account		4,22,000
Add: Factory Overheads under-absorbed in Cost Accounts ₹(3,80,000 – 76,000)	3,04,000	
Closing Stock difference in value ₹(2,14,000 – 1,20,000)	94,000	
Bad Debts not shown in Costing Profit and Loss Account	20,000	
Preliminary expenses not shown in Costing Profit and Loss A/c	10,000	
Legal charges not shown in Costing Profit and Loss A/c		4,33,000
		8,55,000
Less: Over charging of Materials in Costing Profit and Loss A/c \gtrless (2,80,000 – 2,50,000)	30,000	
Administration Overheads over-absorbed in financial Profit and Loss A/c ₹(4,80,000 – 2,50,000)	2,30,000	
Dividend income not shown in Costing Profit and Loss A/c	50,000	
Interest received not shown in Costing Profit and Loss A/c	10,000	(3,20,000)
Net Loss as per Financial Accounts		5,35,000

Q. 4.(b)	Operating Cost Sheet	
Particulars	Per Annum (₹) Per km. (₹)
Standing Charges:		
Insurance (₹50,000 × 6%)	3,000	
Taxes	2,000	
Garage Rent (₹100 × 12)	1,200	
Repairs	2,000	
Driver's Salary	3,000	
Conductor's Salary	1,800	
Stationery	600	
Manager's Salary (₹400 × 12)	4,800	
Total	18,400	
Standing Charges per month (₹18,400 ÷ 12)		1,533.33
Variable Charges:		
Depreciation $\left(\frac{₹50,000}{5 \text{ year} \times 12 \text{ months}}\right)$		833.33
Oil and Diesel $\left(3,000 \text{ km} \times \frac{₹25}{100 \text{ km}}\right)$		750.00
Total Operating Cost per month		3,116.66 or 3,117
Profit (1/3 of cost or 25% on takings)		1,039
Takings		4,156

Total Number of round trips = 3 trips × 25 days = 75 trips

Charge per round trip = ₹4,156 ÷ 75 trips = ₹55.41

Charge or bus fare per passenger = ₹55.41 ÷ 40 passengers = ₹1.38

Working Note: Total km = 25 days × 20 km × 3 trips × 2 round trips (assumed) = 3,000 km

(c)

Q. 4. (b) (i) <i>Dr.</i>	Contract for the year en	Contract Account for the year ending 30-6-2011		
Particulars	₹	Particulars	₹	
To Materials on site	4,20,000	By Materials on hand	6,300	
To Material from stores	81,200	By Work-in-Progress:		
To Labour on site	4,05,000	Work Certified	11,00,000	
To Plant—Hire and use	12,100	Work Uncertified	16,500	
To General Overheads	37,100			
To Wages Accrued	7,800			
To Direct Expenses	23,000			
To Direct Expenses Accrued	1,600			
To Notional Profit c/d	1,35,000			
	11,22,800		11,22,800	
To Profit and Loss A/c		By Notional Profit b/d	1,35,000	
(₹1,35,000 × $\frac{2}{3}$ × $\frac{₹8,80,000}{₹11,00,000}$)	72,000			
To Reserve (Balancing Figure)	63,000			
	1,35,000		1,35,000	

Or

Dr.	Contractee's Account				
	Particulars	₹		Particulars	₹
30-06-11	To Balance c/d	8,80,000	30-06-11	By Cash	8,80,000
		8,80,000			8,80,000
			01-07-11	By Balance b/d	8,80,000

Balance Sheet (An Extract) as on 30-6-2011

Liabilities	₹	Assets		₹
Wages Accrued	7,800	Materials in hand		6,300
Direct Expenses Accrued	1,600	Work Certified	11,00,000	
		Add: Uncertified	16,500	
			11,16,500	
		Less: Cash received	(8,80,000)	
			2,36,500	
		<i>Less:</i> Reserve	(63,000)	1,73,500

Q. 5. (b)

Job Cost Sheet

Particulars	₹	(₹)
Direct Material:		6,000
Wages: Department A (60 hours × ₹30 per hour)	1,800	
Department B (40 hours × ₹20 per hour)	800	
Department C (20 hours × ₹50 per hour)	1,000	3,600
Prime Cost		9,600
Variable Overheads: Department A (60 hours × ₹3)	180	
Department B (40 hours × ₹20)	800	
Department C (20 hours × ₹24)	480	1,460
Fixed Overheads: (120 hours × ₹5 per hour)		600
Total Cost		11,660
Profit (20% of selling price or 25% of cost)		2,915
Selling Price		14,575

Working Notes:

 Computation of Variable Overheads: Department A = ₹15,000/5,000 = ₹3 per hour; Department B = ₹30,000/1,500 = ₹20 per hour Department C = ₹12,000/500 = ₹24 per hour
Since A Department B = ₹50,000/10,000 = ₹24 per hour

2. Fixed Overheads Rate = ₹50,000/10,000 = ₹5 per hour

Or

Q. 5. (b)

Computation	of	Machine	Hour	Rate

Particulars	Per Year (₹)	Per Hour (₹)
Standing Charges:		
Departmental and General Work Overheads	20,000	
Wages of Attendants $\left(\frac{₹1,800 \times 50 \text{ weeks}}{6}\right)$	15,000	
	35,000	
Standing charges per hour (₹35,000 ÷ 2,000 hours)		17.50
Variable Charges:		
Depreciation $\left(\frac{\underbrace{\textbf{₹50,000} - \underbrace{\textbf{₹5,000}}}{5 \times 2,000}\right)$		4.50
Electricity (16 units × ₹2.50)		40.00
Chemical $\left(\frac{\textcircled{200} \times 12}{2,000}\right)$		1.20
Maintenance (₹12,000 ÷ 2,000)		6.00
Machine Hour Rate		69.20

Working Note: Effective hours = 2,200 – 200 = 2,000 hrs