Solutions

Q. 2. (b)

Stores Ledger Card
(FIFO Method)

Date	Receipts			Issues			Balance		
	Qty. (Units)	Rate (₹)	Amt. (₹)	Qty. (Units)	Rate (₹)	Amt. (₹)	Qty. (Units)	Rate (₹)	Amt. (₹)
1-1-17	–	–	–	–	–	–	100	8.00	800
3-1-17	–	–	–	50	8	400	50	8.00	400
4-1-17	200	8.50	1,700	–	–	–	50 200	8.00 8.50	400 1,700
6-1-17	20 (Return)	8	160	–	–	–	70 200	8.00 8.50	560 1,700
8-1-17	–	–	–	70 80	8 8.50	560 680	120	8.50	1,020
9-1-17	100	8.75	875	–	–	–	120 100	8.50 8.75	1,020 875
10-1-17	–	–	–	10 (Return)	8.50	85	110 100	8.50 8.75	935 875
12-1-17	200	9	1,800	–	–	–	110 100 200	8.50 8.75 9.00	935 875 1,800
14-1-17	–	–	–	100	8.50	850	10 100 200	8.50 8.75 9.00	85 875 1,800
15-1-17	–	–	–	5 (Shortage)	8.50	42.50	5 100 200	8.50 8.75 9.00	42.50 875 1,800
Closing Stock							305		2,717.50

Note: Return to stores are entered in the Receipts column at the price at which these were originally issued and re-issued at the immediately next issue.

Or

Q. 2. (b) (i) In order to compute reorder level, information about the minimum usage is required which is not given in the question. Therefore, consumption per day has been taken as minimum consumption or usage. This is computed as follows.

$$\text{Consumption per day} = \frac{\text{Annual demand}}{\text{No. of days}} = \frac{1{,}800 \text{ units}}{360 \text{ days}} = 5 \text{ units}$$

Maximum Stock Level = Re-order Quantity + Re-order Level – (Minimum Consumption × Minimum Re-order Period)

180 = 200 + Re-order Level – (5 × 30 days)

∴ Re-order Level = 180 + 150 – 200 = 130 units

(ii) Economic Order Quantity (EOQ) = $\sqrt{\frac{2AO}{I}}$

Where, A = Annual Consumption = 20,000 units
O = Cost of placing an order = ₹160
I = Storage and Carrying Cost = ₹2.20 + ₹37.80 (10.5% of ₹360) = ₹40

$$\text{EOQ} = \sqrt{\frac{2 \times 20{,}000 \times 160}{40}} = \sqrt{1{,}60{,}000} = 400 \text{ units}$$

$$\text{No. of orders per year} = \frac{20{,}000 \text{ units}}{400 \text{ units}} = 50 \text{ orders}$$

Total Ordering Cost = Total No. of Orders × Cost of one Order

= 50 × ₹160 = ₹8,000

$$\text{Total Storage Cost} = \frac{EOQ}{2} \times \text{Annual Carrying Cost} = \frac{400}{2} \times ₹40 = ₹8,000$$

Total annual cost of using the material

= Annual Consumption × Price per unit + Total Ordering Cost + Total Storage Cost

= 20,000 × ₹360 + ₹8,000 + ₹8,000

= ₹72,00,000 + ₹8,000 + ₹8,000 = ₹72,16,000

Q. 3. (b) **Computation of Machine Hour Rate for 6 Machines**

Particulars	Half Yearly (₹)
Standing Charges:	
Supervision (₹52,800/2)	26,400
Repairs and Maintenance (₹18,00,000 × 3%)/2	27,000
Insurance (₹7,000 × 6)/2	21,000
Other factory Overheads (₹75,670/2)	37,835
Total (A)	1,12,235
Variable Charges:	
Depreciation (₹18,00,000 × 10% × 1/2)	90,000
Power and fuel (₹9,000 × 2)	18,000
Consumable Stores (₹500 × 26 weeks × 6 machines)	78,000
Electricity (₹4,000 × 6 months)	24,000
Total (B)	2,10,000
Total Cost (A + B)	3,22,235
Machine Hour Rate = $\frac{\text{Production Overheads}}{\text{Machine Hours}}$ = ₹3,22,235/5,760 hrs	₹55.94

Working Note: Machine hours = 160 hrs × 6 months × 6 machines = 5,760 hrs.

Or

Q. 3. **Departmental Overhead Distribution Summary**

Item	Basis	Total (₹)	Production Depts.			Service Depts.	
			A (₹)	B (₹)	C (₹)	X (₹)	Y (₹)
Direct Materials	Given	25,000	–	–	–	15,000	10,000
Direct Wages	Given	20,000	–	–	–	10,000	10,000
Stores Overheads	Direct Materials	4,000	1,200	1,000	800	600	400
Motive Power	KWH	15,000	4,800	3,600	3,600	1,200	1,800
Light & Electricity	Light Points	2,000	400	600	600	200	200
Labour Welfare	No. of Employees	30,000	10,000	7,500	7,500	2,500	2,500
Depreciation	Asset Value	60,000	25,000	15,000	10,000	5,000	5,000
Repairs and Maintenance	Asset Value	12,000	5,000	3,000	2,000	1,000	1,000
General Overheads	Direct Wages	1,00,000	35,000	30,000	25,000	5,000	5,000
Rent & Taxes	Area (Sq. yd.)	6,000	2,000	1,500	1,500	500	500
Total		2,74,000	83,400	62,200	51,000	41,000	36,400
Department X	4 : 3 : 3		16,400	12,300	12,300	(41,000)	–
Department Y	7 : 6 : 5		14,156	12,133	10,111	–	(36,400)
Total		2,74,000	1,13,956	86,633	73,411	–	–

Q. 4. **Operating Cost Sheet for the month of March 2017**

Particulars	₹	₹
Standing Charges:		
Garage rent and Insurance	10,000	
Road and Vehicle Taxes	8,000	
Salary of Operating Manager	15,000	
Salary of 3 Assistants (₹8,000 × 3)	24,000	
Salary of 2 Supervisors (₹6,000 × 2)	12,000	
Salary of 25 Drivers (₹4,000 × 25)	1,00,000	
Salary of 25 Conductors (₹2,500 × 25)	62,500	
Salary of Office Staff	50,000	2,81,500
Variable Charges:		
Consumable Stores	18,000	
Petrol	68,000	
Lubricants	13,000	
Replacement of tyres	7,850	
Gas and Electricity	4,250	
Repairs	12,500	
Depreciation	3,00,000	
Misc. Expenses	5,000	4,28,600
Total Operating Cost		7,10,100

∴ Cost Per Passenger km = Total Cost/Total Passenger km

$$= \frac{₹7,10,100}{₹76,72,500} = ₹0.0925$$

Working Note:

Calculation of Passenger km:

(i) 10 Buses × 50 Passengers × 10 trips × 2 (round trip) × 15 km × 75% × 31 days = 34,87,500

(ii) 15 Buses × 40 Passengers × 10 trips × 2 (round trip) × 15 km × 75% × 31 days = 41,85,000

Total Passenger km = 34,87,500 + 41,85,000 = 76,72,500

Or

Q. 4. (a) **Reconciliation Statement**

Particulars	₹	₹
Profit as per Cost Books		6,02,280
Add: Overheads over-absorbed in Cost Books (₹1,50,000 – ₹1,38,640)	11,360	
Interest received on bank deposit	15,600	26,960
		6,29,240
Less: Income tax not included in Cost Books	1,80,000	
Director's Fees	75,000	(2,55,000)
Profit as per Financial Books		3,74,240

(b) **Contract Account**

for the year ending 31st December, 2016

Particulars		₹	Particulars		₹
To Materials sent to site		8,53,490	By Materials returned		5,490
To Labour	7,43,750		By Materials in hand		18,830
Add: Wages accrued	24,000	7,67,750	By Plant at site		1,10,000
To Plant Installed		1,50,000	By Work-in-progress:		
To Direct Expenditure	41,260		Work Certified	19,50,000	
Add: Direct Exp. Accrued	2,400	43,660	Work Uncertified	45,000	19,95,000
To Establishment Charges		31,670			
To Notional Profit c/d		2,82,750			
		21,29,320			21,29,320
To Profit and Loss A/c		1,74,000	By Notional Profit b/d		2,82,750
To Reserve		1,08,750			
		2,82,750			2,82,750

Working Note:

Percentage of work certified to the contract price $= \frac{19,50,000}{25,00,000} \times 100 = 78\%$

Work certified lies between 50% and 90% of the value of the contract.

$\therefore$ Transfer to Profit and Loss A/c $= \frac{2}{3} \times$ Notional Profit $\times \frac{₹18,00,000}{₹19,50,000} = ₹1,74,000$

Q. 5. **Statement of Cost and Profit**

for the year ended 31st December, 2016

Particulars	₹	₹
Raw Material Purchased	12,00,000	
Less: Closing Stock	(1,50,000)	
Direct Materials Consumed		10,50,000
Direct Labour Cost		6,00,000
Prime Cost		16,50,000
Factory Overhead:		
Indirect Labour Cost	1,20,000	
Gas, Electricity and water (₹1,00,000 × 90%)	90,000	
Insurance (₹40,000 × 70%)	28,000	
Rent (₹4,00,000 × 80%)	3,20,000	
Depreciation on factory equipment	1,60,000	7,18,000
		23,68,000
Add: Opening Work-in-Progress (1.1.2016)		4,20,000
Less: Closing Work-in-Progress (31.12.2016)		(4,80,000)
Cost of Production		23,08,000
Add: Opening stock of finished goods		5,40,000

Less: Closing stock of finished goods		(4,00,000)
Cost of Goods Sold		24,48,000
Administrative and selling Expenses:		
Gas, electricity and water (₹1,00,000 × 10%)	10,000	
Insurance (₹40,000 × 30%)	12,000	
Rent (₹4,00,000 × 20%)	80,000	
Selling and Administrative Overhead	3,20,000	4,22,000
Cost of Sales		28,70,000
Profit (Balancing Figure)		3,30,000
Sales		32,00,000

Or

Q 5. ***Dr.*** **Process I Account** ***Cr.***

Particulars	Units	₹	Particulars	Units	₹
To units Introduced @ ₹30 per unit	1,000	30,000	By Normal Loss (50@₹20)	50	1,000
To Direct Materials		26,000	By Transfer to Process II A/c (Balancing Figure)	950	95,000
To Direct Wages		20,000			
To Production Overheads		20,000			
	1,000	96,000		1,000	96,000

Dr. **Process II Account** ***Cr.***

Particulars	Units	₹	Particulars	Units	₹
To Process II A/c	950	95,000	By Normal Loss (95 @ ₹40)	95	3,800
To Direct Materials		19,800	By Abnormal Loss @₹200	15	3,000
To Direct Wages		30,000	By Transfer to Process III A/c (Balancing Figure)	840	1,68,000
To Production Overheads		30,000			
	950	1,74,800		950	1,74,800

Working Note:

Abnormal Loss = Units Introduced – Normal Loss – Actual Output

= 950 – 95 – 840 = 15 units

$$\text{Value of Abnormal Loss} = \frac{₹1,74,800 - ₹3,800}{950 \text{ units} - 95 \text{ units}} \times 15 \text{ units} = ₹3,000$$

Dr. **Process III Account** ***Cr.***

Particulars	Units	₹	Particulars	Units	₹
To Process II A/c @ ₹200	840	1,68,000	By Normal Loss (126@ ₹50)	126	6,300
To Direct Materials		29,620	By Transfer to Finished Stock (Bal. figure)	750	2,85,000
To Direct Wages		40,000			
To Production Overheads		40,000			
To Abnormal Gain @₹380	36	13,680			
	876	2,91,300		876	2,91,300

Working Notes:

Abnormal Gain = Actual Output + Normal Loss – Units Introduced

= 750 + 126 – 840 = 36 units

Value of Abnormal Gain = $\frac{₹2,77,620 - ₹6,300}{840 \text{ units} - 126 \text{ units}}$ × 36 units = ₹13,680

Dr. **Normal Loss Account** ***Cr.***

Particulars	Units	₹	Particulars	Units	₹
To Process I A/c	50	1,000	By Sales: Process I	50	1,000
To Process II A/c	95	3,800	Process II	95	3,800
To Process III A/c	126	6,300	Process III	90	4,500
			By Abnormal Gain transferred		
			to Profit and Loss A/c (36 units @ ₹50)	36	1,800
	271	11,100		271	11,100

Dr. **Abnormal Loss Account** ***Cr.***

Particulars	Units	₹	Particulars	Units	₹
To Process II A/c	15	3,000	By Sale of scrap @ ₹40 per unit	15	600
			By Costing Profit and Loss A/c		2,400
	15	3,000		15	3,000

Dr. **Abnormal Gain Account** ***Cr.***

Particulars	Units	₹	Particulars	Units	₹
To Normal Loss @ ₹50 per unit (Shortfall in sale of scrap)	36	1,800	To Process III A/c	36	13,680
To Costing Profit and Loss A/c		11,880			
	36	13,680		36	13,680