Note: All questions are compulsory.

Question 1 (8 marks)

Statement showing the Working Capital Requirement of the Company (8 marks)

A. Current Assets (CA)	(₹)
Stock of raw materials [₹ 64,80,000 / 12 months) 2 months]	10,80,000
Work-in-progress [(₹ 1,51,20,000 4) / 52 months] 50%	5,81,538
Finished goods (₹ 1,51,20,000 / 12 months)	12,60,000
Debtors (₹ 28,80,000 80%) (Refer to Working note 2)	23,04,000
Cash balances	1,00,000
	53,25,538
B. Current Liabilities(CL)	
Creditors of raw materials (₹ 64,80,000 / 12 months)	5,40,000
Creditors for wages & overheads $\dfrac{28,80,000 57,60,000}{52\,weeks} \times 1.5\,weeks$	2,49,231
	7,89,231
Net Working Capital (CA CL)	45,36,307

Working Notes:	(₹)
1, Annual raw materials requirements (1,44,000 units 45)	64,80,000
Annual direct labour cost (1,44,000 units 20)	28,80,000
Annual overhead costs (1,44,000 units 40)	57,60,000
Total Cost (Rs.)	1,51,20,000
2. Total Sales (1,44,000 units 120)	1,72,80,000
Two months sales (₹ 1,72,80,000 / 6 months)	28,80,000

Question 2 (8 marks)

Statement showing the Evaluation of Debtors Policies (Total Approach)

Particulars	Present Policy (30 days)	Proposed Policy I (40 days)	Proposed Policy II (60 days)	Proposed Policy III (75 days)
	(`)	(`)	(`)	(`)
A. Expected Profit: (4 mark) (a) Credit Sales	4,20,000	4,41,000	4,72,500	4,83,000
(b) Total Cost (other than Bad Debts)				
(i) Variable Costs [Sales x `2/`3]	2,80,000	2,94,000	3,15,000	3,22,000
(ii) Fixed Costs (W.N. 1)	35,000	35,000	35,000	35,000
Total Cost (Variable Cost+ Fixed Cost)	3,15,000	3,29,000	3,50,000	3,57,000
(c) Bad Debts	4,200 (1% of 4,20,000)	6,615 (1.5% of 4,41,000)	14,175 (3% of 4,72,500)	19,320 (4% of 4,83,000)
(d) Expected Profit [(a) – (b) – (c)]	1,00,800	1,05,385	1,08,325	1,06,680
B. Opportunity Cost of Investments in Receivables * (2 marks)	5,250 (315000*30/100*20/360)	7,311 (329000*40/360*20/100)	11,667 (350000*60/100*20/360)	14,875 (357000*75/360*20/100)
C. Net Benefits (A – B)(1mark)	95,550	98,074	96,658	91,805

Recommendation: The Proposed Policy I (i.e. increase in collection period by 10 days or total 40 days) should be adopted since the net benefits under this policy are higher as compared to other policies. (1 mark)

Working Note- 1:

(i) Calculation of Fixed Cost

= [Average Cost per unit – Variable Cost per unit] × No. of Units sold

= [(2.25 – 2) × (`4, 20,000/3)]    = `35,000

*Calculation of Opportunity Cost of Average Investments

Opportunity Cost = Total Cost x Collection period x rate of return

                                        360 days   100

Question 3 (5 marks)

(a) Labour Turnover by Replacment Method = $\dfrac{\text{No.of workers replaced during the quarter}}{\text{Average no.workers onroll during the quarter}}$

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Or,   0.03 $=\dfrac{\text{No.of workers replaced during the quarter}}{(990+1,010\div2)}$

Or, No. of worker replaced during the quarter =0.03 × 1,000=30 workers **(2 marks)**

    (i)   Labour Turnover by Separation Method **(1 ½ mark)**

$=\dfrac{\text{No.of workers replaced during the quarter}}{\text{Average no.workers onroll during the quarter}} \times 100$

$=\dfrac{\text{Worker at begining+Fresh recruitment+Replacements−workers at closing}}{\text{Average no.workers onroll during the quarter}} \times 100$

$=\dfrac{990+4030-1,010}{(990+1,010)\div2} \times 100$ $=\dfrac{50 \text{ workers}}{1,000 \text{ workers}} \times 100 = 5\%$

    (ii)   Labour Turnover by Flux Method **(1 ½ mark)**

$\dfrac{\text{No.of workers(Separated+ replaced+Fresh Recuriment) during the quarter}}{\text{Average no.workers onroll during the quarter}} \times 100$

$=\dfrac{50+30+40}{(990+1,010)\div2} \times 100 = \dfrac{120 \text{ workers}}{1,000 \text{ workers}} \times 100 = 12\%$

Question 4 (5 marks)

Output by experienced workers in 50,000 hours = $\dfrac{50000}{10}$ = 5,000 units

    ∴ Output by new recruits   = 60% of 5,000 = 3,000 units

    Loss of output   = 5,000 – 3,000 = 2,000 units

Total loss of output	= Due to delay recruitment + Due to inexperience
	= 10,000 + 2,000 = 12,000 units
Contribution per unit	= 20% of `360 = ` 72
Total contribution lost	= `72 × 12,000 units = ` 8,64,000 (2 marks)
Cost of repairing defective units	= 3,000 units × 0.2 × ` 25 = ` 15,000 (1 mark)

Profit forgone due to labour turnover (2 marks)

			(`)
Loss of Contribution			8,64,000

Cost of repairing defective units	15,000
Recruitment cost	3,12,680
Training cost	2,26,360
Settlement cost of workers leaving	3,66,960
Profit forgone in 2016-17	17,85,000

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Question5 (8 marks)

(a) Working Notes :

1. Total Kilometers to be run during the year 2016-17

= 50km x 2 sides x 3trips x 25 days x 12 month x 6 buses = 5,40,000 Kilometers

= 5,40,000km. x 48 passengers x 75% = 1,94,40,000 Passenger –km.

Operating Cost Sheet for the year 2016-17

	Particulars	Total Cost(Rs.)
A.	**Fixed Charges (1/2 mark for each cost)**	
	Garage rent (Rs. 6,000 x 12 months	72,000
	Salary of drivers (Rs.4,000 x 6 drivers x 12 months)	2,88,000
	Wages of Conductors (Rs. 1,600 x 6 conductor x 12 months)	1,15,200
	Wages of Clearance (Rs.1,000 x 6 clearance x 12 months)	72,000
	Manager's salary (Rs. 10,000 x 12 months)	1,20,000
	Road Tax ,Permit fee etc. (Rs.6,000 x 4 quarters)	24,000
	Office expenses (Rs. 2,500 x 12months)	30,000
	Depreciation (Rs.7,50,000 x 6 buses x 20 %)	9,00,000
	Insurance (Rs. 7,50,000 x 6 buses x 4%)	1,80,000
	Total (A)	**18,01,200**
B.	**Variable Charges: (1/2 mark for each cost)**	
	Repairs and Maintenance (Rs. 24,000 x 6 buses)	1,44,000
	Diesel {(5,40,000km. ÷ 6 km.)x Rs.66}	59,40,000
	Engine oils &lubricants {(Rs. 2000 ÷ 1000 km.) x 5,40,000km}	10,80,000
	Total (B)	**71,64,000**
	Total Cost (A+B)	**89,65,200**
	Add 33 $^{1/3}$ %Profit on takings or 50% on cost (1/2 mark)	**44,82,600**
C.	**Total Takings (Total bus fare collection)**	**1,34,47,800**
D.	**Total Passenger-km.(Working Note 2) (1 ½ mark)**	**1,94,40,000**
E.	**Bus fare to be charged from each passenger per km. (C ÷ D)**	**0.6918**

Question6 (8 marks)

Statement Showing Sales Budget for 2015-16 (4 marks)

	Product X			Product Y			Total
Division	Qty.	Rate (˅)	Amt. (˅)	Qty.	Rate (˅)	Amt. (˅)	Amt. (˅)
East	500[1]	10	5,000	400[3]	20	8,000	13,000
West	700[2]	10	7,000	600[4]	20	12,000	19,000
Total	1,200		12,000	1,000		20,000	32,000

Workings

1. 400 × 110% + 60 = 500 units

2. 600 × 105% + 70 = 700 units

3. 300 × 120% + 40 = 400 units

4. 500 × 110% + 50 = 600 units

Statement Showing Sales Budget for 2014-15 (2 marks)

Division	Product X			Product Y			Total
	Qty.	Rate (`)	Amt. (`)	Qty.	Rate (`)	Amt. (`)	Amt. (`)
East	400	9	3,600	300	21	6,300	9,900
West	600	9	5,400	500	21	10,500	15,900
Total	1,000		9,000	800		16,800	25,800

Statement Showing Actual Sales for 2014-15 (2 marks)

Division	Product X			Product Y			Total
	Qty.	Rate (`)	Amt. (`)	Qty.	Rate (`)	Amt. (`)	Amt. (`)
East	500	9	4,500	200	21	4,200	8,700
West	700	9	6,300	400	21	8,400	14,700
Total	1,200		10,800	600		12,600	23,400

Question7 (8 marks)

a. **Cost plus contract:** Under cost plus contract, the contract price is ascertained by adding a percentage of profit to the total cost of the work. Such types of contracts are entered into when it is not possible to estimate the contract cost with reasonable accuracy due to unstable condition of material, labour services etc. **(2 marks)**

Following are the advantages of cost plus contract: **(2 marks)**

(i)   The contractor is assured of a fixed percentage of profit. There is no risk of incurring any loss on the contract.

(ii) It is useful specially when the work to be done is not definitely fixed at the time of making the estimate.

(iii) Contractee can ensure himself about the 'cost of contract' as he is empowered to examine the books and documents of the contractor to ascertain the veracity of the cost of contract.

b. **Operating Costing**: It is method of ascertaining costs of providing or operating a service. This method of costing is applied by those undertakings which provide services rather than production of commodities. This method of costing is used by transport companies, gas and water works departments, electricity supply companies, canteens, hospitals, theatres, schools etc. **(2 marks)**

Composite units may be computed in two ways: **(2 marks)**

(a) Absolute (weighted average) tones- km., quintal- km. etc.

(b) Commercial (simple average) tonnes- km., quintal-km. etc.

Absolute tonnes-km. are the sum total of tonnes-km. arrived at by multiplying various distances by respective load quantities carried.

Commercial tonnes-km., are arrived at by multiplying total distance km., by average load quantity.

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