PUNJAB STATE TRANSMISSION CORPORATION LTD.

Departmental Accounts Examination- 2024 (1st Session)

Category SAS Part II | Paper- VIII | Roll No.

(Works and Management Accounting)

Time allowed: 3 hours | Max. Marks: 100

Note: All questions are compulsory

Question 1.

A machine costing Rs.1,00,00,000 is expected to run for 10 years. At the end of this period its scrap value is likely to be Rs.9,00,000. Repairs during the whole life of the machine are expected to be Rs.18,00,000 and the machine is expected to run 4,380 hours per year on the average. Its electricity consumption is 15 units per hour, the rate per unit being Rs.5. The machine occupies one-fourth of the area of the department and has two points out of a total of ten for lighting. The foreman must devote about one sixth of his time to the machine. The monthly rent of the department is Rs.30,000 and the lighting charges amount to Rs.8,000 per month. The foreman is paid a monthly salary of Rs.19,200.

Find out the machine hour rate, assuming insurance is @ 1% p.a. on 1,00,00,000 and the expenses on oil, etc., are Rs.900 per month.

(20 marks)

Question 2.

Using the following data, prepare the Balance Sheet:

Gross profits	Rs. 54000
Shareholders Funds	Rs. 600000
Gross Profit Margin	20%
Credit Sales to Total Sales	80%
Total Assets turnover	0.3 times
Inventory turnover 4 times	4 times
Average collection period (a 360 days year)	20 days
Current ratio	1.8
Long-term Debt to Equity	40%

(20 marks)

Question 3.

S Ltd has assets of Rs. 320000, which have been financed with Rs. 104000 of debt Rs. 180000 of equity a general reserve of Rs 36000. The company's total profit after interest and taxes for the year ended 31.3.18 was Rs 27000. It pays 8% interest on borrowed funds and is in the 30% tax bracket. It has 1800 equity shares of Rs 100 per share, presently selling at a market price of Rs 120 per share. What is the weighted average cost is capital of S Ltd.

(20 marks)

Question 4.

Float glass Manufacturing Company requires you to present the Master budget for the next year from the following information:

Sales:		
	Toughed Glass	Rs. 600000
	Bent Glass	Rs. 200000
Direct material cost:		60% of sales
Direct Wages:		20 workers @ Rs.150/month
Factory Overheads:		
Indirect Labour	Works manager	Rs. 500/month
	Foreman	Rs. 400/month
Stores and Spares		2.5% on sales
Depreciation on machinery		Rs. 12600
Light and power		Rs. 3000
Repairs and maintenance		Rs. 8000
Other sundries		10% of direct wages
Administration, selling and distribution expenses		Rs.36000/year

(20 marks)

Question 5.

The following are the costing records for the year 2017 of a manufacturer: Production 20,000 units: Cost of Raw Materials ` 2,00,000; Labour Cost ` 1,20,000; Factory Overheads ` 80,000; Office Overheads ` 40,000; Selling Expenses `10,000, Rate of Profit 25% on the Selling Price. The manufacturer decided to produce 25,000 units in 2017. It is estimated that the cost of raw materials will increase by 20%, the labour cost will increase by 10%, 50% of the overhead charges are fixed and the other 50% are variable. The selling expenses per unit will be reduced by 20%. The rate of profit will remain the same. Prepare a Cost Statement for the year 2017 showing the total profit and selling price per unit.

(20 marks)

SAS- II - VIII

PAPER - VIII

(WORKS AND MANAGEMENT ACCOUNTING)

Solution 1:

Totalnumberofhoursperannum-4,380Hours Total number of hours per month- 365 Hours

ComputationofMachineHourRate

	PerMonth(Rs.)	PerHour(Rs.)
Fixedcosts(StandingCharges)		
Depreciation(Referworkingnote-1)	75,833	
Rent(Rs.30,000×¼)	7,500	
Lightingcharges{(Rs.8,000×2points)÷10 points}	1,600	
Foreman'ssalary(Rs.19,200×1/6)	3,200	
Sundryexpenses(oil etc.)	900	
Insurance{(1%ofRs.1,00,00,000)÷12 months}	8,333	
	97,366	97,366/ 365Hours= 266.76
Variablecosts:		
Repairs[$\frac{1800,000}{4380 \times 10}$]		41.10
Electricity (15units×Rs.5)		75.00
Machine Hour rate		**382.86**

Working notes:

(1) **Depreciation per month= Cost of Machine - Scrap value / Life of the machine**

= 1,00,00,000 - 9,00,000 / (10 years X 12 months) = Rs. 75,833

Solution 2:

Balance Sheet of X Ltd			
Liabilities	**Rs.**	**Assets**	**Rs.**
Sundry Creditors	60,000	Cash	42,000
Long term debt	240,000	Sundry Debtors	12,000
Shareholder fund	6,00,000	Inventory	54,000
		Fixed assets	7,92,000
	9,00,000		9,00,000

Working notes:

1. **Gross Profit:**

GP Margin = 20%

GP = Rs. 54000

Sales = 54000/20% = Rs. 270,000

2. **Credit Sales:**

Credit Sales = 80% of Total Sales

= 270,000 X 80%

= 216000

3. **Total Assets:**

Total Assets Turnover = Sales / Total Assets = 0.3 Times

Total Assets = 270,000 / 0.3

= 9,00,000

4. **Inventory Turnover:**

Inventory Turnover = COGS / Inventory X 100

= 270,000 - 54000 / Inventory

= 216000 / 4 = 54000

5. Debtors:

Debtors = Credit Sales X 20 days / 360 days

= 216000 X 20/360

= 12000

6. Creditors:

Total Assets = 9,00,000

Total of Balance Sheet = 9,00,000

Now, Long term debt = Long term debt / equity = 40%

Long term debt = 40% of equity

= 600,000 X 40%

= 240,000

Now balancing figure of Liability side is creditors

= 900,000 - 6,00,000 (Equity) - 240,000 (Long term debt)

Creditors = 60,000

7. Current Ratio - Cash:

Current Ratio = Current Assets/Current Liabilities

1.8 = Debtors + Inventory + Cash / Creditors

1.8 = 12000 + 54000 + Cash / 60,000

108000 = 66000 + Cash

Cash = 42000

8. Fixed Assets:

Balancing Figure on Assets Side is Fixed Assets.

9. Sales:

COGS= Sales - G.P.

COGS= 270,000 - 54,000 = 216000

Solution 3:

Statement showing computation of Weighted average cost of capital

Items	Market Value (Rs.)	Weight (Value/Total value) (W)	After Tax Cost % (K)	Total Cost % (W*K)
Equity Share Capital	180,000	0.5625 (180,000 / 320,000)	12.5	7.03125
General Reserve	36,000	0.1125	12.5	1.40625
Debt	104,000	0.325	5.6	1.82
Weighted Average Cost of Capital				10.2575

Therefore, required weighted average cost of capital is **10.26%**

Working Notes:

1. Market Value of equity = 1800 * 120 =Rs 216000

Ratio of equity share capital and general reserve = 180000:36000

Market Value of equity share capital = Rs 216000*5/6 =Rs 180000

Market Value of general reserve = Rs 216000*1/6 = Rs 36000

2. Earning per share (E) =Rs 27000/1800 = Rs 15

Cost of Equity share capital (Ke) =E/P= Rs 15/Rs 120=0.125 or 12.5%

Cost of general reserve is 12.5% also.

3. Cost of debt (Kd) = I/P (1-t)=8/100 (1-0.30)= 0.056 or 5.6%

Solution 4:

(`)

MASTER BUDGET

Sales :			
Toughened Glass			6,00,000
Bent Glass			2,00,000
Total Sales			8,00,000
Less : Cost of production :			
Direct materials (60% of ` 8,00,000)		4,80,000	
Direct wages (20 workers × ` 150 × 12 months)		36,000	
Prime Cost		5,16,000	
Fixed Factory Overhead :			
Works manager's salary (500 × 12)	6,000		
Foreman's salary (400 × 12)	4,800		
Depreciation	12,600		
Light and power (assumed fixed)	3,000	26,400	
Variable Factory Overhead :			
Stores and spares	20,000		
Repairs and maintenance	8,000		
Sundry expenses	3,600	31,600	
Works Cost			5,74,000
Gross Profit (Sales - Works Cost)			2,26,000
Less: Administration, selling and dist. expenses			36,000
Net Profit			1,90,000

Solution 5:

Statement of Cost (Cost sheet)

(Output 20,000 units)

Particulars	Costperunit (Amountin `)	Total Cost (Amountin `)
Raw Materials	10	2,00,000
Labour	6	1,20,000
PRIMECOST	16	3,20,000
Add:FactoryOverhead	4	80,000
WORKSCOST	20	4,00,000
Add:OfficeOverhead	2	40,000
COST OFPRODUCTION	22	4,40,000
Add:SellingExpenses	.5	10,000
COST OFSALES	22.5	4,50,000
Add:Profit(25%onSellingPriceor33.33%on CostofSales)	7.50	1,50,000
SELLINGPRICE	30.00	6,00,000

Statement of Cost (Cost sheet)

(Output 25,000 units)

Particulars	Costperunit (Amountin `)	Total Cost (Amountin `)
RawMaterials(`10x120%x25,000)	12	3,00,000
Labour(`6x110% x25,000)	6.6	1,65,000
PRIMECOST	18.6	4,65,000
Add:FactoryOverhead (80,000x50%+2x25,000)	3.6	90,000
WORKSCOST	22.2	5,55,000
Add:OfficeOverhead (40,000x50%+1x25,000)	1.8	45,000
COST OFPRODUCTION	24	6,00,000
Add:SellingExpenses (0.5x80%x25,000)	0.4	10,000
COST OFSALES	24.4	6,10,000
Add:Profit(25%onSellingPriceor33.33% onCostofSales)	8.132	2,03,313
SELLINGPRICE	32.532	8,13,313