29TH COMPREHENSIVE EXAMINATION – MAY 2014

Marks

CASE # 1

(a) Undertaking of 5% price reduction:

Rs./ per Unit

	Before 5% Price Reduction	After 5% Price Reduction	Marks
Sales revenue	40,000	38,000	½ + ½
Variable costs:			
Compressor	7,000	7,000	½ + ½
Other direct materials	3,700	3,700	½ + ½
Direct labor	3,000	3,000	½ + ½
Variable overhead	4,500	4,500	½ + ½
Variable selling	1,800	1,800	½ + ½
Total variable costs	20,000	20,000	½ + ½
Contribution margin	20,000	18,000	½ + ½

Contribution margin:

	Rs. '000'	Marks
Before 5% price reduction (20,000 x 18,750)	375,000	1
After 5% price reduction (18,000 x 21,750)	391,500	1
Increase in contribution margin	16,500	1

Decision:

Yes, AC Division should undertake the 5% price reduction on its air conditioner units because contribution margin would increase by Rs.16,500,000. 1

(b) Supply of Compressors to AC Division:

Rs./ per Unit

	Outside Sales	Sales to AC Div.	Marks
Selling price	10,000	5,000	½ + ½
Variable costs:			
Direct materials	1,200	1,050	½ + ½
Direct labour	800	800	½ + ½
Variable overhead	1,000	1,000	½ + ½
Variable selling expenses	600	–	½ + ½
Total variable costs	3,600	2,850	½ + ½
Contribution margin	6,400	2,150	½ + ½

Contribution margin:

	Rs. in '000'	Marks
If Auxiliary Division does not consider to transfer 21,750 units to AC Division (80,000 x 6,400)	512,000.0	1
If Auxiliary Division transfer 21,750 units to AC Division (W-1)	507,562.5	
Decrease in contribution margin	4,437.5	1

Workings: W-1:

			Marks
If Auxiliary Division transfer 21,750 units to AC Division	(21,750 x 2,150)	46,762,500	1
	(72,000 x 6,400)	460,800,000	1
		507,562,500	

Marks

Decision:

No, the Auxiliary Division should not sell all 21,750 units to AC Division for Rs.5,000 each. If the Auxiliary Division does sell all 21,750 units to AC Division, it will only be able to sell 72,000 units to outside customers instead of 80,000 units due to the capacity restrictions. This would decrease Auxiliary Division's contribution margin by Rs.4,437,500. Auxiliary Division would be willing to accept any orders from AC Division above the 80,000 unit level at Rs.5,000 per unit because there would be a positive contribution margin of Rs.2,150 per unit. 1

(c) Best interest to supply the compressors:

		Rs. in '000'	Marks
Contribution margin of AC Division:			
If buying from Auxiliary Division (22,000* x 21,750)	478,500		½
If buying from outsider (20,000 x 21,750)	435,000		½
Increase in AC Division contribution		43,500	
Contribution margin of Auxiliary Division:			
If supply 21,750 units to AC Division (W-1)	507,562.5		½
If does not supply 21,750 units to AC Division (6,400 x 80,000)	512,000		½
Decrease in contribution of Auxiliary Division		(4,437.5)	
Net benefit to Zephyr Industries		39,062.5	1

* Contribution margin as calculated in **(a)** above Rs. 20,000 + Reduced compressor cost 2,000.

Decision:

Yes, it would be in the best interests of Zephyr Industries for the Auxiliary Division to sell the units to the AC Division at Rs.5,000 each. The net advantage to Zephyr Industries is Rs.39,062,500. 1

(d) As the answers to requirements **(b)** and **(c)** above show, Rs.5,000 is not a goal-congruent transfer price. Although a transfer is in the best interests of Zephyr Industries as a whole, a transfer of Rs.5,000 will not be perceived by the Auxiliary Division's management as in that division's best interests. 2

Marks

CASE # 2

(a) New balance sheet under each alternative: Rs. '000'

	Alternative			Alternative			Marks
	1 & 2	3		1	2	3	
			Total current liabilities	3,000	3,000	3,000	1
			Long-term debt			10,000	1
			Share capital, par Rs.10	3,250	3,000	3,000	1
			Share premium	8,750	9,000	9,000	1
			Retained earnings	1,000	1,000	1,000	1
Total assets	16,000	26,000	Total claims	16,000	16,000	26,000	1
			OR	2	+ 2	+ 2	= 6

(b) Mr. Jawad Ahmed's control position under each alternative:

	Original	Plan-1	Plan-2	Plan-3	Marks
Number of shares	160,000	160,000	160,000	160,000	
Total shares	200,000	325,000	300,000	300,000	
Percent ownership	80%	49%	53%	53%	
		1	+ 1	+ 1	= 3

(c) Effect on earnings per share of each alternative: Rs. '000'

	Original	Plan-1	Plan-2	Plan-3	Marks
Total assets	11,000	16,000	16,000	26,000	
EBIT	2,200	**3,200**	**3,200**	**5,200**	1+1+1
Interest	400	–	–	800	½+½+½
EBT	1,800	3,200	3,200	4,400	1+1+1
Taxes (40%)	720	1,280	1,280	1,760	½+½+½
Net income	1,080	1,920	1,920	2,640	1+1+1
Number of shares (000)	200	325	300	300	
Earning per share	5.4	5.9	6.4	8.8	1+1+1
	OR	5	+ 5	+ 5	= 15

(d) Debt ratio under each alternative: Rs. '000'

	Original	Plan-1	Plan-2	Plan-3	Marks
Total debt	8,000	3,000	3,000	13,000	
Debt/ assets ratio	73%	19%	19%	50%	
		1	+ 1	+ 1	= 3

(e) Recommendation to Stylish Carpet Company:

Alternative-1 results in loss of control (to 49%) for the firm. Under it, he loses his majority of shares outstanding. Indicated earnings per share increase, and the debt ratio is reduced considerably (by 54% points). 1

Altervative-2 results in maintaining control (53%) for the firm. Earnings per share increase, while a reduction in the debt ratio like that in Alternative-1 occurs. 1

Under Altervative-3, there is also maintenance of control (53%) for the firm. This plan results in the highest earnings per share (88 cents), which is an increase of 63% on the original earnings per share. The debt ratio is reduced to 50%. 1

THE END