STRATEGIC FINANCIAL MANAGEMENT [C3] – CHARTERED LEVEL

Marks

Question No. 1

M/s Irfan (Pvt.) Limited
Statement of Sources and Uses of Funds
for the year ended June 30, 2017

	Rs. in million	Marks
Sources:		
Working capital from operations (N-1)	868	½
Share capital issued	500	½
Sale of investment	650	½
Sale of property, plant and equipment (PPE)	315	½
Total funds provided	2,333	1
Uses:		
Purchase of investment	650	½
Payment to debenture holders	210	½
Purchase of PPE (8,720 + 545 + 123 – 8,200)	1,188	1½
Payment of taxes	27	½
Payment of dividend	93	½
Total funds applied	2,168	1
Increase in working capital	165	1

N-1: Working Capital from Operations:

		Rs. in million	Marks
Profit – June 30, 2017		980	½
Add: Depreciation	203		½
Loss on sale of PPE (545 – 315)	230		½
Premium on redemption of Debentures (200 x 5%)	10		½
Provision of taxation (52 + 27 – 42)	37		1
Transfer to reserve	100		½
Provision of dividend	108	688	1
		1,668	½
Less: Profit – June 30, 2016		800	½
Funds from Operations		868	1

Question No. 2

(a) (i) Economic Lot Size:

					Rupees	Marks
Cash requirement	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	½
Lot size	250,000	500,000	1,000,000	1,250,000	2,500,000	½
Number of lots	20	10	5	4	2	1¼
Conversion cost per lot	5,000	5,000	5,000	5,000	5,000	½
Total conversion cost	100,000	50,000	25,000	20,000	10,000	1¼
Average lot size	125,000	250,000	500,000	625,000	1,250,000	1¼
Interest cost	6,250	12,500	25,000	31,250	62,500	1¼
Total cost	106,250	62,500	50,000	51,250	72,500	1¼

Economic lot size = Rs.1,000,000 as at this size the total costs are minimum. ¼

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(ii) Optimal Conversion Amount:

$$C = \sqrt{\frac{2bt}{i}} = \sqrt{\frac{50,000,000,000}{0.05}} = \sqrt{1,000,000,000,000} = \text{Rs.}1,000,000$$ 3

(b) There are four primary motives for maintaining cash balances:

- Transaction motives: This refers to the holding of cash to meet routine cash requirements to finance the transactions which a firm carries on in the ordinary course of business. 1
- Precautionary motives: Precautionary motive of holding cash implies the need to hold cash to meet unpredictable obligations. 1
- Speculative motives: It refers to the desire of a firm to take advantage of opportunities which present themselves at unexpected moments and which are typically outside the normal course of business. 1
- Compensating motives: Banks provide a variety of services to business firms, such as clearance of cheque, supply of credit information; transfer of funds and so on. While for some of these services banks charge a commission or fee, for others they seek indirect compensation. Usually clients are required to maintain a minimum balance of cash at the banks. Since this balance cannot be utilized by the firms for transaction purposes, the banks themselves can use the amount to earn a return. Such balances are compensating balances. 1

Question No. 3

(a) Value per Share:

Total earnings	=	600,000 x 4	= Rs.2,400,000	½
Payout ratio	=	600,000 ÷ 2,400,000	= 0.25	¼
Retention ratio	=	1 – 0.25	= 0.75	¼
Growth	=	0.20 x 0.75	= 0.15	½
Value of the company	=	$\frac{600,000 \times 1.15}{0.18 - 0.15}$	= 23,000,000	½
Value per share	=	$\frac{23,000,000}{600,000}$	= Rs.38.33	1

(b) Estimated Value per Share:

Industry average EPS	=	$\frac{1.2 + 1.3 + 2.0}{3}$	= Rs.1.50	½
Payout ratio of industry	=	$\frac{0.45}{1.5}$	= 0.30	¼
Retention ratio	=	1 – 0.30	= 0.70	¼
g	=	0.70 x 0.11	= 0.077	½
Dividend (D_1)	=	600,000 x 1.15	= 690,000	½
D_2	=	600,000 x 1.323	= 793,800	½
D_3	=	600,000 x 1.521	= 912,600	½

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D_4	= 600,000 x 1.749	= 1,049,400	½
D_5	= 600,000 x 2.011	= 1,206,600	½
Terminal cash flow	= $\frac{1{,}206{,}600 \times 1.077}{0.15 - 0.077}$	= 17,801,482	1½

Today's Value of Stock:

Cash Flows	PV Factors	PV (Rupees)	Marks
690,000	0.870	600,300	¼
793,800	0.756	600,113	¼
912,600	0.658	600,491	¼
1,049,400	0.572	600,257	¼
1,206,600	0.497	599,680	¼
17,801,482	0.497	8,847,337	¼
		11,848,178	½

Value per share = $\frac{11{,}848{,}178}{600{,}000}$ = Rs.19.75 ½

(c) Industry Average Price-Earnings Ratio:

P/E ratio – After revision, industry P/E ratio will be (18 ÷ 1.5)	12.00	½
DJ Engines P/E ratio – Original assumption (38.33 ÷ 4.0)	9.58	½
DJ Engines P/E ratio – Revised assumption(19.75 ÷ 4.0)	4.94	½

There is positive correlation existed between the two calculated ratios which means that if the price-earnings ratio of industry will increase, the price-earnings ratio of DJ Engines will also increase and vice versa in the case of decrease. ½

(d) The stock price can easily be increased in this case by issuance of more dividends to shareholders. The stock price has been calculated as: 1

$$\frac{D}{(R - g)}$$

But in case of lowering growth rate, this strategy will not be helpful for DJ Engines in increasing the stock price. 1

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Question No. 4

(a) & (b): Optimal Capital Structure and Weighted Average Cost of Capital (WACC):

Market Debt-to-Value Ratio (w_d)	Market Equity-to-Value Ratio (w_e)	Debt-Equity ratio (D/E)	Before tax Cost of Debt (r_d)	After tax Cost of Debt r_d(1-T)	Leveraged beta	Common cost of equity (r_s)	WACC	Marks
0.0	1.0	0.00	7.00%	4.83%	0.90	12.30%	12.30%	3
0.3	0.7	0.43	8.00%	5.52%	1.17	14.16%	11.57%	3
0.5	0.5	1.00	9.00%	6.21%	1.52	16.65%	11.43%	3
0.7	0.3	2.33	10.00%	6.90%	2.35	22.44%	11.56%	3
0.9	0.1	9.00	11.00%	7.59%	6.49	51.42%	11.97%	3
OR	1½ +	1½	+	3 +	3 +	3 +	3 =	15

The Company's optimal structure is that capital structure which minimizes the Company's weighted average cost of capital.

Weighted average cost of capital of M/s Golden Enterprises Limited is minimized at a capital structure consisting of 50% debt and 50% equity. At this Weighted average cost of capital (WACC) of the company is 11.43%.

Question No. 5

(a) Theoritical Ex-Rights Price:

		Rs. in million	
Market value of shares in issue	(50 million x Rs.110)	5,500	½
Proceed from new shares	(50 million x 3/5 x Rs.100)	3,000	½
Total		8,500	½
Number of shares in issue ex-rights			
		(Million shares)	
Number of shares issued		50	½
Number of rights shares	(50 x 3/5)	30	½
Total		80	½
Theoritical ex-rights price (Rupees)	(8,500 ÷ 80)	106.25	1

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(b)

		Rs. in million	Marks
(i) Take up the shares**:**			
Wealth of M/s Alam & Co. – Before	(2.0 million shares x Rs. 110)	220	1
Wealth of M/s Alam & Co. – After			
Take up the shares	(3.2 million shares x Rs. 106.25)	340	½
Less: Cash paid to buy shares	(1.2 million shares x Rs. 100)	120	½
Total wealth		220	½
(ii) Sell the rights	(2.0 million shares x Rs. 106.25)	212.5	½
Add: cash received from sale of rights	(1.2 million shares x Rs. 6.25*)	7.5	½
Total Wealth		220.0	½
*Value of a right	(Rs.106.25 – Rs.100)	6.25	1
(iii) Do nothing	(2.0 million shares x Rs. 106.25)	212.5	1
Total Wealth		212.5	

Therefore, total wealth under Option-3 is Rs.7.5 million less than Option-1 and 2. By doing nothing you theoretically eventually forego the right to the new shares.

Question No. 6

(a) Return on Investment:

	Merger with Khan Sugar Ltd. (Rs. in million)	Merger with Shan Sugar (Pvt.) Ltd. (Rs. in million)	Marks
Star Sugar Limited's required investment (N-5)	6,345	6,292	¼
Net profit after tax	345	414	¼
Synergy impact (N-2)	107.09	99	¼
	452	513	½
Return on investment	7.13%	8.15%	1

Notes:

	Khan Sugar Ltd. (Rs. in million)	Shan Sugar (Pvt.) Ltd. (Rs. in million)	Marks
N-1: Working of Maintainable Earnings:			
Net profit after tax	345.00	414.00	½
Add: Interest expense	27.60	34.50	1
Maintainable earnings	372.60	448.50	1
N-2: Impact of Synergy for Star Sugar Ltd.:			
Net profit of Star Sugar Ltd.	966.00	966.00	½
Maintainable earnings – Khan/ Shan Sugar Ltd. (N-1)	372.60	448.50	½
	1,338.60	1,414.50	½
Synergy impact on profitability	8.00%	7.00%	
Synergy Impact	**107.09**	**99.02**	1

N-3: Cost of Equity:

$r_s = r_{RF} + (r_M - r_{RF})\beta = 6 + (13 - 6) \times 1 = 13\%$ 1½

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			Rs. in million	
		Khan Sugar Ltd.	Shan Sugar (Pvt.) Ltd.	
N-4:	Total value of Khan/ Shan Sugar Ltd.:			
	Total value of Khan Sugar Ltd. $\left(\frac{372.60\ (N-1) \times 1.07}{0.13\ (N-3) - 0.07}\right)$	6,645	–	2
	Total value of Shan Sugar Ltd. $\left(\frac{448.50\ (N-1) \times 1.06}{0.13\ (N-3) - 0.06}\right)$	–	6,792	2
N-5:	Total Value of Equity:			
	Total value of companies (N-4)	6,645	6,792	¼
	Less: Long-term liabilities	300	500	½
	Value of equity	6,345	6,292	½

Recommendation:

Star Sugar Limited should takeover Shan Sugar (Pvt.) Limited as it yields 8.15% return on investment as compared to 7.13% return from Khan Sugar Limited. 1

Question No. 7

(a) Among the steps involved in implementing and maintaining an effective risk management policy are:

- Identifying risks
- Ranking those risks
- Agreeing control strategies and risk management policy
- Taking action
- Regular monitoring
- Regular reporting and review of risk and control.

½ mark each = 03

A good risk management policy builds a sound framework for:

- Risk assessment and identification,
- Risk ranking,
- Action Plan,
- Assessment and review,
- Compliance and
- Feedback and Improvement

½ mark each = 03

(b) **(i)** The actual KIBOR is above the forward rate agreement (FRA) rate, therefore, the bank will pay the difference as compensation to CASA Ltd. i.e., 0.25%. 1

CASA Ltd. will borrow at the best available rate, which is KIBOR + 1% i.e., 7.50% (6.50% + 1%). 1

Net cost to CASA Ltd. = 7.50% – 0.25% = 7.25% 1

This amounts to 0.0725 x 3/12 x Rs.5 million = Rs.90,625. 1½

(ii) As the actual base rate is below the FRA rate, CASA Ltd. will pay compensation of 0.75% to the bank. 1

CASA Ltd. will borrow at the best available rate i.e., 6.50% (5.50% + 1%). 1

Net cost to CASA Ltd. = 6.50% + 0.75% = 7.25% 1

This amounts to 0.0725 x 3/12 x Rs.5 million = Rs.90,625. 1½

THE END

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