FINAL EXAMINATION SET - 1

MODEL QUESTION PAPER TERM – DECEMBER 2023

PAPER – 20A SYLLABUS 2022

STRATEGIC PERFORMANCE MANAGEMENT AND BUSINESS VALUATION

Time Allowed: 3 Hours **Full Marks: 100**

The figures in the margin on the right side indicate full marks.

SECTION – A (Compulsory)

1. Choose the correct option: **[15 x 2 = 30]**

(i) According to Altman's z-score model (1968), calculate the value of X_5 from the following information:

Total assets – 10,00,000

Retained earnings – 4,00,000

Sales – 12,00,000

Working capital – 10,00,000.

(a) 1

(b) 1.2

(c) 0.4

(d) 0.83

(ii) Given the following information for a business:

Asset turnover = 3.50

Equity multiplier = 1.00

Return on equity = 30%

Using the DuPont analysis, the net profit margin is ____________

(a) 8.57%

(b) 5.87%

(c) 7.65%

(d) 6.75%

(iii) Which one of the following is not a measure related to Balanced Score Card?

(a) Financial

(b) Customer Satisfaction

(c) Internal Processes

(d) Gap Analysis

(iv) The Cost function of a firm is given by $C = x^3 - 4x^2 + 7x$. Find at what level of output the average cost is minimum and what would be the minimum average cost.

(a) 2,3

(b) 4,5

(c) 1,4
(d) None of the above

(v) In which discipline supply chain concept was originated?
(a) Production
(b) Operation
(c) Marketing
(d) Logistics

(vi) Small/Mid-sized Six Sigma projects are executed by professionals titled as:
(a) Champion
(b) Green Belt
(c) Black Belt
(d) Site Champion

(vii) Unique risk is also referred as:
(a) Systematic risk
(b) Operational risk
(c) Default risk
(d) Non-systematic risk

(viii) Assume that the following details are given for a company: Sales- ₹ 1,00,000; Costs - ₹ 75,000; Depreciation- ₹ 20,000; Tax- 35%; Change in Net Working Capital- ₹1,000; Change in Capital Spending- ₹ 10,000. The Free Cash Flow to Firm (FCFF) for the given data would be:
(a) ₹ 10,000
(b) ₹ 12,250
(c) ₹ 13,500
(d) ₹ 15,000

(ix) X Ltd.'s share beta factor is 1.40. The risk free rate of interest on government securities is 9%. The expected rate of return on the company equity shares is 16%. The cost of equity capital based on CAPM is:
(a) 15.8%
(b) 16%
(c) 18.8%
(d) 9%

(x) If a company has a P/E ratio of 12 and a Market to Book Value Ratio 2.10, then its Return on Equity will be:

(a) 14.10%
(b) 17.50%
(c) 25.20%
(d) None of the above

(xi) A firm current assets and current liabilities are ₹ 1,600 and ₹ 1,000 respectively. How much can it borrow on a short-term basis without reducing the current ratio below 1.25?
(a) ₹ 1,000
(b) ₹ 1,200
(c) ₹ 1,400
(d) ₹ 1,600

(xii) Which Act is responsible for entrusting the Asset Reconstruction Companies (ARCs) for raising funds by issuing security receipts to the set of qualified buyers?
(a) SARFAESI Act
(b) Banking regulation act 1949
(c) SEBI Act 1992
(d) Companies Act 2013

(xiii) Which of the followings is not the core principle of valuation?
(a) Ethics
(b) Perception
(c) Compliance
(d) Data

(xiv) 8% bond of Face Value ₹ 100 is selling for ₹ 96. What would be its Current Yield?
(a) 8%
(b) 12%
(c) 8.33%
(d) None of the above

(xv) If the Value of target Co. is ₹ 500 Million and the value of acquiring company is ₹800 Million. Present value of cost savings if the two companies are merged together is ₹ 100 million. Acquiring company expects the cost of integration as ₹80 million and the shareholders of Target Co. are expecting a deal premium to be paid of 15 percent over their company's value. What is the value of Combined entity?
(a) ₹ 1400 million
(b) ₹ 1345 million
(c) ₹ 1445 million
(d) ₹ 1540 million

SECTION – B

(Answer any five questions out of seven questions given. Each question carries 14 Marks.)

2. (a) Describe Customer Relationship Management (CRM). List the advantages and benefits of 'Customer Relationship Management'. **[7]**

(b) "In order to encompass new drivers of future financial performance, BSC introduces customer, internal-business-process, and learning and growth perspectives for translation of the organization's strategy into tangible objectives and measures." — Explain the four perspectives of Balanced Scorecard (BSC). **[7]**

3. (a) A manufacturer can sell 'Q' items ($Q > 0$) at a price of $(330 – Q)$ each; the cost of producing Q items is $TC(Q) = Q^2 + 10Q + 12$. Compute how many items should he sell to make the profit maximum? Also determine the maximum profit. **[7]**

(b) Interpret the essence of Enterprise Risk Management (ERM). Summarize the actual need for implementing ERM. **[7]**

4. (a) Describe (with formula) the Five Component DuPont Analysis. **[7]**

(b) Using Altman's Model (1968) of Corporate Distress Prediction, calculate the Z-score of S & Co. Ltd., whose five accounting ratios are given as below and comment on its financial position. The five variables are:

(i) Working Capital to Total Assets = 25%

(ii) Retained Earnings to Total Assets = 30%

(iii) EBIT to Total Assets = 15%

(iv) Market Value of Equity Shares to Book Value of Total Debt =150%

(v) Sales to Total Assets = 2 times. **[7]**

5. (a) Umang Ltd. has announced issue of warrants on 1:1 basis for its equity shareholders. The current price of the stock ₹ 10 and warrants are convertible at an exercise price of ₹ 11.71 per share. Warrants are detachable and are trading at ₹3. Compute the minimum price of the warrant and the warrant premium.

Now had the current price been ₹ 16.375, calculate the minimum price and warrant premium? (Consider warrants are tradable at ₹ 9.75). **[7]**

(b) There is a privately held company XYZ Pvt. Ltd. that is operating into the retail space, and is now scouting for angel investors. The details pertinent to valuing XYZ Pvt. Ltd. are as follows:

The company has achieved break even this year and has an EBITDA of ₹ 90 crores. The beta based on the industry in which it operates is 1.8, and the average debt to equity ratio is hovering at 40:60. The rate of return provided by liquid bonds is 5%. The EV is to be taken at a multiple of 5 on EBITDA. The accountant has informed that the EBITDA of ₹ 90 crore includes an extraordinary gain of ₹ 10 crore for the year, and a potential write off of preliminary sales promotion costs of ₹ 20 crore are still pending. The internal assessment of rate of market return for the industry is 11%. The FCFs for the next 3 years are as follows:

	Y1	Y2	Y3
Future cash flows (₹ In Crore)	100	120	150

The cost of debt will be 12%. Assume a tax regime of 30%. Calculate the potential value to be placed on XYZ Pvt. Ltd.? **[7]**

6. (a) PS Combines Ltd. furnishes the following information relating to the previous three years, and requests you to compute the value of the brand of the Company —

(₹ in Lakhs)

Particulars	2020	2021	2022
Profits Before Interest and Tax	75.00	85.25	150.00
Loss on Sale of Assets	3.00	---	18.00
Non-Operating Income	12.00	7.25	8.00

Inflation was 9% for 2020 and 15% for 2021. If the capitalization factor considering internal and external value drivers to the brand is 14, determine the brand value. Assume an all-inclusive future tax rate of 35%. **[7]**

(b) From the following information concerning Nebula Ltd., compute EVA for the year ended 31st March 2023:

Summarized Profit and Loss Account for the year ended 31st March 2023

Particulars	Amount (₹)	Amount (₹)
Sales		20,00,000
Cost of goods sold		12,00,000
Gross Profit		8,00,000
Expenses:		
General	2,00,000	

Office and administration	2,50,000	
Selling and distribution	64,000	5,14,000
Profit before interest and tax (PBIT)		2,86,000
Interest	36,000	36,000
Profit before tax (PBT)		2,50,000
Tax 40%		1,00,000
Profit after tax		1,50,000

Summarized Balance Sheet as on 31st March 2023

Particulars	2023 (₹)
Equity and Liabilities:	
Shareholders' Funds:	
Share Capital	2,40,000
Reserves and Surplus	1,60,000
	4,00,000
Non-Current Liabilities:	
Long-Term Borrowings	2,40,000
	2,40,000
Current Liabilities	
Trade payables	1,60,000
	1,60,000
Total	8,00,000
Assets:	
Non-Current Assets	
Fixed Assets:	
Tangible Assets	6,00,000
	6,00,000
Current Assets	
Inventories	1,20,000
Trade Receivables	60,000
Cash and Bank Balances	20,000
	2,00,000
Total	8,00,000

Other particulars:

(i) Cost of goods includes depreciation expenses of ₹ 60,000.

(ii) The expectation return of shareholders is 12%. **[7]**

7. **(a)** Pure Drugs Limited is in the Pharmaceutical Industry and has a business strategy of growing inorganically. It is contemplating to acquire Solid Drugs Limited which has a strong hold in cardiac segment. Pure Drugs Limited has 30 crore shares outstanding which are trading on an average price of ₹ 300 while Solid Drugs Limited has outstanding shares 20 crore and are selling at an average price of ₹ 200 per share. The EPS are of ₹ 12 and ₹ 6 for Pure Drugs Limited and Solid Drugs Limited respectively. Recently, the management of both the companies had a meeting wherein number of alternative proposals was considered for exchange of shares. They are —

(i) Exchange Ratio should be in proportion to the relative EPS of two companies.

(ii) Exchange Ratio should be in proportion to the relative share prices of two companies.

(iii) Exchange Ratio should be 3 shares of Pure Drugs Limited for every 5 shares of Solid Drugs Limited.

You are required to calculate EPS and Market Price under the three options, assuming the P/E of Pure Drugs Limited after merger will remain unchanged. Assume that there will not be any synergy gains due the said merger. **[7]**

(b) X Ltd. is considering a takeover of Y Ltd. The particulars of the two companies are given below:

Particulars	X Ltd.	Y Ltd.
Earnings after Tax (EAT) (in ₹)	20,00,000	10,00,000
Equity Shares (Nos.)	10,00,000	10,00,000
EPS	2	1
P/E Ratio (times)	10	5

Required:

(i) Compute the market value of each company before merger.

(ii) Assuming that the management of X Ltd. estimates that the shareholders of Y Ltd. will accept an offer of one share of X Ltd. for four shares of Y Ltd. If there are no synergic effects, compute the market value of the Post-merger X Ltd. Are the shareholders of X Ltd. better off than they were before the merger?

(iii) Due to synergic effects, the management of X Ltd. estimates that the earnings will increase by 20%. Calculate the new Post-merger EPS and the Price per Share. Will the shareholders be better-off or worse-off? **[7]**

8. **(a)** The Balance Sheets of Maras Ltd. for the years ended on 31.03.2022 and 31.03.2023 are as follows:

Amount in ₹ Lakh)

	As at 31.03.22	As at 31.03.23
Equity & Liabilities		
Shareholder's Fund:		
Share capital	696.60	726.70
Equity Share suspense	30.07	—
Equity Share warrants	—	841.20
Reserve & Surplus	31,256.89	39,156.40
Non-Current Liabilities:		
Secured Loans	4,784.56	3,300.09
Unsecured Loans	9,128.31	14,939.75
Deferred Tax liabilities	3,491.00	3,936.27
Current Liabilities:		
Other current liabilities	8,432.77	10,522.73
Provisions	856.44	1,496.31
	58,676.64	74,919.45
Assets		
Non-current assets	—	—
Fixed Assets (Net)	31,830.23	30,941.81
Capital work in progress	3,764.07	11,502.92
Non-Current Investment:		
Investment	8,125.67	11,031.80
Current Assets:		
Inventories	6,068.25	7,123.77
Trade receivables	1,866.21	3,113.79
Cash and bank balance	917.68	2,140.03
Other current assets	1.53	36.27
Loans and advances	6,103.00	9,029.06
	58,676.64	74,919.45

(i) How would you prepare the Common-Size Balance Sheet of Maras Ltd.?

(ii) Interpret your observations on the common-size Balance Sheet. **[7]**

(b) ABC Ltd. run and managed by an efficient team that insists on reinvesting 60% of its earnings in projects that provide an ROE (return of equity) of 10%, despite the fact that the firm's capitalization rate (K) is 15%. The firm's current year's earning is ₹ 10 per share.

Recommend at what price the stock of ABC Ltd. Sell. Calculate the present value of growth opportunities. Justify why would such a firm be a takeover target? **[7]**