2025

COMMERCE

Paper : DSE-405A

[Financial Analysis (FA)]

Full Marks : 40

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Module - I

Answer ***any two*** questions.

1. (a) What do you mean by 'accounting distortions' in published financial statements? Explain how such distortions might arise and what should be the objective of financial analysis in that regard.

(b) Based on the following extracted information of a company, prepare a multi-step income statement, conduct a year-on-year change analysis and comment on the results obtained :

Particulars	Year ending 31st March (in ₹ crore)	
	2024	2025
Net Sales	1720	1650
Cost of Goods Sold	1200	1200
Other Operating expenses	600	350
Finance Costs	30	0
Net Income	(110)	70

( ) implies negative value. 4+6

2. (a) Can a grocery store with a lower margin on sales have the same return on assets as that of a jewellery shop with a higher margin on sales? Give argument for your answer.

(b) Examine the significance of Defensive Interval ratio.

(c) The following balances are extracted from the annual reports of X Ltd. for the financial years ended 31st March, 2022, 2023, 2024 and 2025 :

(₹ '000,000)

	2022	2023	2024	2025
Near Cash Assets	47	41	43	45
Trade Receivables	45	46	47	42
Current Assets	150	147	145	150
Current Liabilities	105	100.4	99	107

Interpret the liquidity position of X Ltd. based on Motaal's Comprehensive Test. 2½+2½+5

3. (a) Based on the following information on Y Ltd. in respect of a term loan, you are required to work out the yearly debt service coverage ratio and interpret the solvency position of the firm based on average value of the ratio over the five years :

Year	Profit Before Tax for the year (₹ in lakh)	Interest on Term Loan during the year (₹ in lakh)	Repayment of Term Loan in the year (₹ in lakh)
2020-21	8	1.20	16
2021-22	8	0.72	12
2022-23	10	0.36	6
2023-24	10	0.18	4
2024-25	10	0.06	2

The profit before tax has been arrived at after charging depreciation of ₹ 4 lakh every year, and the corporate tax rate has been 50%.

(b) The association between leverage and profitability of Z Ltd. over the period 2004-2005 to 2024-2025 has been found as follows :

(i) Karl Pearson's correlation coefficient between equity multiplier and return on equity is (–) 0.5.

(ii) Karl Pearson's correlation coefficient between interest coverage ratio and return on equity is 0.4.

Comment on the statistical significance of the above findings considering table values of 't' at 1% significance level with relevant degrees of freedom as 2.861 and at 5% level as 2.093 in two tailed test. 5+5

4. The following information are extracted from the Statement of Profit and Loss and Balance Sheet of a steel company for the year ended 31st March, 2025. Prepare cash flow statement of the company for the same period under indirect method and determine appropriate cash flow based capital expenditure and profitability ratios to interpret the financial performance of the firm. 10

	Amount (₹)
Surplus in Profit and Loss Statement	5,20,000
Depreciation and Amortization Expense	7,20,000
Profit on Sale of Investments	80,000
Finance Costs	2,88,000
Interest Income	26,000
Dividend Income	18,000
Taxes Paid	1,30,000
Net Cash provided by Financing activities	1,22,000
Net Cash used in Investing activities	12,76,000
Equity Share Capital (₹ 10 each)	60,00,000
Reserves (including Surplus for FY 24-25)	40,00,000
Changes in Current Assets (other than cash)	(2,00,000)
Changes in Current Liabilities	(4,00,000)
Cash and Cash Equivalents	9,30,000
Total Assets	1,73,20,000

Module - II

Answer ***any two*** questions.

5. (a) (i) 'Extensive disclosure of quality information is the key to market efficiency.'— Identify the condition of market efficiency implied in the given statement. How does this condition help in promoting market efficiency?

(ii) 'In an efficient capital market, dynamic equilibrium prevails always.' — Justify the given statement.

(b) You are given the Net Income/Total Assets ratio of the estimation sample of the following 6 firms comprising of 3 failed (F) and 3 Non-failed (NF) firms :

Name of the Firm	Net Income/ Total Assets (%)	Status
A	13.0	NF
B	12.5	NF
C	12.0	F
D	11.5	NF
E	11.0	F
F	9.5	F

You are required to calculate the optimum cut-off score of the above estimation sample for prediction of corporate failure. [(1+1½)+1½]+6

Please Turn Over

6. (a) Stock exchanges of emerging economies across the world are often characterized by low investor participation, high transaction cost and limited availability of information. As a result, stock prices often fail to reflect past information leading to the weak form inefficiency in the market. Driven by this opportunity, a technical analyst from Indonesia Stock Exchange has decided to conduct a Runs Test on price movements of stock or indices in the exchange. He has selected IDX Composite Index, the leading stock index of Indonesia Stock Exchange and collected the following information on daily closing index value for the last six months period :

No. of upward movement = 43

No. of downward movement = 68

Actual no. of runs = 62

Apply Runs Test clearly stating the null and alternative hypothesis and advise the analyst as regards to the level of efficiency of Indonesia Stock Exchange. What is the implication of this efficiency status to the analyst? (Choose the appropriate level of significance between 1% and 5% and conclude.)

(b) Mention the ratios in order of effectiveness used by Beaver in his model for prediction of corporate failure.

(c) What were Beaver's findings in regard to effectiveness of the first two ratios of his model in respect of correct classification of firms between failed and non-failed categories?

(d) How did the last ratio mentioned by Beaver perform in his model in respect of correctly classifying firms into sick and non-sick units? (5+1)+1+2+1

7. (a) You are required to calculate Altman's Z score and interpret the result from the information given below in respect of XYZ Ltd. relating to the financial year 2024-25 :

	₹
Sales	20,00,000
Earnings before tax	3,88,000
Interest on Debentures	12,000
Fixed Assets	3,00,000
Current Assets	8,00,000
Equity Shares of ₹ 10 each, fully paid	2,00,000
Reserve and Surplus	1,00,000

Market price per share is ₹ 8

Current Ratio 4:3

Book Value of Debentures/Book Value of Equity 1:1

(b) 'In an efficient market, the analyst's efforts should always be directed to develop unique data prediction models which are cost effective.'— In the context of the given statement, explain the dynamic role of a financial analyst in an efficient market. 6+4

8. (a) Mr. Brilliant, a financial analyst, wanted to examine whether the BSE is efficient in semi-strong form. He decided to follow the Portfolio Study approach in this process. Since, in a semi-strong form efficient market, there will hardly be any possibility to earn superior risk adjusted return by trading on any publicly observable characteristic of firms, he decided to analyze whether the excess return across portfolios, formed based on the magnitude of assets size, differ significantly or not. Accordingly, he selected 100 BSE listed firms randomly from BSE 500 index and based on their magnitude of asset size (calculated on 1.1.2021 i.e., the opening date of the sample period of three years i.e., 2021-2023) and divided them into 5 classes/ portfolios as follows :

Portfolio	Firms with Asset Size (₹ in crore)
P	Less than ₹ 500 crores
Q	₹ 501 to ₹ 1000 crores
R	₹ 1,001 to ₹ 1500 crores
S	₹ 1501 to ₹ 2000 crores
T	Above ₹ 2000 crores

He decided to analyze the excess average portfolio returns across different portfolios for the sample period based on average annual returns. He found the following equally weighted average annual returns (%) for the 5 portfolios and the index under consideration.

Portfolio	Annual Returns (%)		
	2021	2022	2023
P	17.57	14.59	16.10
Q	15.43	13.31	14.05
R	12.52	10.51	11.87
S	9.57	7.60	8.58
T	7.81	7.72	7.21
Market Index	7.75	6.25	7.00

In order to calculate the expected risk adjusted return of each portfolio, he calculated the 'beta' value of each stock based on annual stock and index returns over last 5-year period prior to the sample period. The equally weighted average β of the five portfolios under study appear to be as follows :

Portfolios	A	B	C	D	E
β	1.5	1.4	1.2	1.0	0.9

You are required to :

(i) Calculate the expected return and excess risk adjusted return for each portfolio for each year under study and comment on the apparent trend.

(ii) Suppose, the researcher has already applied single factor ANOVA test (parametric F test) on the excess portfolio returns and obtained the following result :

Sources of variation	SS	d.f	MS	F Observed	F Critical (at 1%)
Between groups	40.76703	?	?	?	5.994339
Within groups	1.550867	?	?		
Total	42.31789	14			

Complete the ANOVA table. Suggest the null and alternative hypotheses, interpret the results and conclude on the efficiency of the market.

(b) Explain briefly the sample of firms taken by Altman in his model for prediction of corporate failure.

(c) (i) How many ratios were initially considered by Altman for developing his original model?

(ii) What was the rationale behind the selection of the second ratio in his original model?

6+1+(1+2)