

INTERMEDIATE EXAMINATION

June 2026

P-11(FMDA)

Syllabus 2022

FINANCIAL MANAGEMENT AND BUSINESS DATA ANALYTICS

Time Allowed: 3 Hours

Full Marks: 100

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

*Where considered necessary, suitable assumptions may be made
and clearly indicated in the answer.*

All working notes should form part of your answer.

Section-A (Compulsory)

1. Choose the correct option from the four alternatives given:

2×15=30

- (i) Which of the following is not a systematic risk?
- (A) Market risk
 - (B) Interest rate risk
 - (C) Purchasing power risk
 - (D) Business risk
- (ii) The sensitivity of a security to market movement is measured by _____.
- (A) Standard Deviation
 - (B) Co-efficient of variation
 - (C) Beta
 - (D) Alfa
- (iii) How much amount should an investor invest now in order to receive five annuities starting from the end of this year of ₹ 15,000 if the rate of interest offered by bank is 12% per annum? [PVIFA (12%, 5 yrs.) = 3.6048]
- (A) ₹ 54,072
 - (B) ₹ 45,025
 - (C) ₹ 37,910
 - (D) None of the above
- (iv) _____ is a price discovery mechanism and is becoming increasingly popular as a method of issuing capital.
- (A) Green shoe option
 - (B) Offer for sale
 - (C) Employee stock option
 - (D) Book building

- (v) The Reserve Bank of India sold a 91day T-Bill of face value ₹ 100 at a yield of 7%. The issue price is therefore _____.
- (A) ₹ 98.00
 - (B) ₹ 98.08
 - (C) ₹ 98.48
 - (D) ₹ 98.28
- (vi) I Ltd.'s market price of shares having face value of ₹ 10 is ₹ 40. The profit available for equity shareholders are ₹ 5,00,000 and number of equity share is 1,00,000. Calculate Earning Yield ratio.
- (A) 11.5%
 - (B) 12.5%
 - (C) 13.5%
 - (D) 14.5%
- (vii) A company has a Debt-Equity ratio of 1.7, whereas the industry average for Debt-Equity ratio is 1.2. This implies that _____.
- (A) the company has higher capital employed
 - (B) the company has higher liquidity
 - (C) the company has higher financial risk
 - (D) the company is more profitable than other companies in the industry
- (viii) A company issued ₹ 2,00,000, 9% debentures at a premium of 10%. The costs of floatation are 2%. The tax rate is 50%. What is the after-tax cost of debt?
- (A) 4.15%
 - (B) 4.17%
 - (C) 14.17%
 - (D) 4.20%
- (ix) When the cost of equity capital under CAPM has to be calculated, which of the following is not taken into consideration?
- (A) Beta Factor
 - (B) Market Rate of Return
 - (C) Market Price of Equity Share
 - (D) Risk-free Rate of Interest

- (x) Which of the following is not followed in capital budgeting?
- (A) Cash Flow Principle
 - (B) Interest Exclusion Principle
 - (C) Accrual Principle
 - (D) Post-tax Principle
- (xi) In Capital Budgeting, Sunk Cost is excluded because _____.
- (A) it is of small amount
 - (B) it is not incremental
 - (C) it is not reversible
 - (D) All of the above
- (xii) Given, Annual demand 8,000 units; ordering cost ₹ 40 per order; carrying cost ₹ 1 per unit per annum. Determine Economic Order Quantity.
- (A) 800 units
 - (B) 600 units
 - (C) 400 units
 - (D) 500 units
- (xiii) Average collection period is 2 months, cash sales and average receivables are ₹ 5,00,000 and ₹ 6,50,000 respectively. The sales amount would be _____.
- (A) ₹ 40,00,000
 - (B) ₹ 42,00,000
 - (C) ₹ 44,00,000
 - (D) ₹ 48,50,000
- (xiv) Which of the following is not a type of Data validation?
- (A) Code Check
 - (B) Range Check
 - (C) Consistency Check
 - (D) Price Check
- (xv) A _____ depicts tasks that must be accomplished before others may be begin, as well as the allocation of resources.
- (A) Scatter Plots
 - (B) Density Map
 - (C) Bubble Chart
 - (D) Gantt Chart

SECTION – B

Answer any five questions from the following. Each question carries 14 marks. $14 \times 5 = 70$

2. (a) What do you mean by credit rating? Explain the process of credit rating. 7
(b) How does Prescriptive Analytics work? Explain its advantages and disadvantages. 7
3. (a) The following information is available from A Ltd. Calculate different ratios and prepare a Balance Sheet of A Ltd. for the year ending 31.03.2025.

Current Ratio	2.0
Liquid Ratio	1.4
Working Capital	₹ 40,000
Stock Turnover Ratio (Based on Cost of Goods Sold)	5 times
Fixed Assets Turnover Ratio (Based on Cost of Goods Sold)	2 times
Gross Profit Ratio	20%
Debtors Velocity	73 days
Fixed Assets to Shareholders' Net Worth	0.80
Reserve and Surplus to Share Capital	0.25

Assume that all the sales have been made in credit, opening and closing stock are equal and opening and closing balances of debtors are equal. 7

- (b) From the following information of B Ltd., calculate the net cash flow from Financing Activities.

Particulars	31-3-2025 (₹)	31-3-2026 (₹)
Equity Share Capital	10,00,000	16,00,000
9% Debentures	1,50,000	1,00,000
Dividend Payable	—	50,000
10% Preference Share Capital	2,00,000	3,00,000

Additional Information:

- (i) Interest paid on Debentures ₹ 13,500.
- (ii) During the year 2025-26, the company issued bonus shares to equity shareholders in the ratio of 2:1 by capitalizing reserve.
- (iii) The interim dividend of ₹ 75,000 has been paid during the year.
- (iv) 9% Debentures were redeemed at 5% premium.
- (v) Proposed equity dividend for the year ended 31.03.2025 was ₹ 3,00,000 out of which dividend of ₹ 50,000 could not be paid during the year 2025-26. 7

4. (a) Presented below are the revenue and expense data for C Ltd. for the year ended on 31st March 2026 and 2025:

Particulars	2026 (₹)	2025 (₹)
Sales	8,16,000	6,56,500
Sales returns and allowances	16,000	6,500
Cost of goods sold	4,00,000	3,12,000
Selling Expenses	2,00,000	1,30,000
General Expenses	1,20,000	78,000
Miscellaneous Income	6,400	6,500
Income Tax	32,000	67,600

You are required to prepare a Common Size Income Statement for the year ended on 31st March 2026 and 2025 for the company and also comment on the relationships revealed in the Common Size Income Statement. 7

- (b) D Ltd. wishes to raise additional finance of ₹ 30 lakhs for meeting its investment plans. The company has ₹ 6,00,000 in the form of retained earnings available for investment purposes.

The following are the further details available:

- Debt-equity ratio to be maintained = 30:70
- Cost of debt at the rate of 11% (before tax) up to ₹ 3,00,000 and 14% (before tax) beyond ₹ 3,00,000.
- Current Earnings per share = ₹ 15.
- Dividend payout = 70% of earnings.
- Expected growth rate in dividend = 10% p.a.
- Current market price per share = ₹ 90.
- Tax rate applicable for the company is 30%.

You are required to:

- Calculate the post-tax average cost of additional debt.
- Calculate the cost of retained earnings and cost of equity.
- Calculate the overall weighted average (after tax) cost of additional finance. 7

5. (a) E Ltd. is evaluating a project with the following details:

- Initial Investment in Fixed Assets = ₹ 6,00,000
- Working Capital Required = ₹ 1,00,000 (recoverable at the end of the project)
- Project Life = 4 years
- Salvage Value of Asset = ₹ 80,000
- Depreciation to be charged under Straight Line Method
- Sales Revenue = ₹ 4,00,000 per annum
- Operating Costs (excluding depreciation) = ₹ 2,00,000 per annum
- Tax Rate = 30%
- Discount Rate = 12%

[Given: PVI Factor :]

Year	1	2	3	4
PV at 12% p.a.	0.893	0.797	0.712	0.636

Required:

Analyze Net Present Value of the project and give your recommendation.

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- (b) F Ltd. is considering the purchase of a machine. Two machines X and Y are available in the market. Machine X will cost ₹ 60,000 and has a life of 5 years. Machine Y will cost ₹ 98,000 and has a life of 7 years. There will be no salvage value from any machine. The estimated cash flows before tax and depreciation (CFBT) from the two machines are as under:

Year	Cash flows before tax and depreciation	
	Machine X (₹)	Machine Y (₹)
1	30,000	42,800
2	24,000	35,600
3	22,000	28,400
4	20,000	21,200
5	14,000	18,000
6	—	17,000
7	—	16,400

F Ltd. uses straight line method of depreciation for income tax purpose and tax rate is 50%.

Required:

Analyse the two machines and advise which one is to be purchased under Payback Period Method.

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6. (a) G Ltd.'s Cost Sheet provides the following particulars:

Elements of Cost	Amount p.u (₹)
Raw materials	80.00
Direct wages	30.00
Overheads	60.00
Total Cost	170.00
Profit	30.00
Selling Price	200.00

The company provides you the following particulars:

- Raw materials are in stock on an average for one month.
- Materials are in process on an average for half a month. Assume 50% completion stage in respect of labour and overheads and 100% completion in respect of materials.

- Finished goods are in stock on an average for one month.
- Credit allowed by the suppliers is one month.
- Credit allowed to debtors is two months.
- Time lag in payment of wages is 1½ weeks.
- Time lag in payment of overhead expenses is one month.
- One-fourth of the output is sold against cash.
- Cash in hand and at bank is expected to be ₹ 25,000.
- Production is carried on evenly throughout the year, and wages and overheads accrue similarly.

Required:

Prepare a Statement Showing the Working Capital Requirement to finance a level of activity of 1,04,000 units of production. (Assume, 4 weeks = 1 month) 7

- (b) H Ltd. is currently selling 50,000 units annually at ₹ 20 per unit. The variable cost is ₹ 12 per unit. The company is considering relaxing its credit policy, which is expected to:

- Increase sales to 60,000 units
- Increase the average collection period from 30 days to 60 days
- Increase bad debts from 1% to 3% of sales

Additional information:

- Required rate of return: 15%
- Assume 360 days in a year

Required:

Calculate (i) Cost of Additional Investment in Receivables, (ii) Incremental Bad Debts and (iii) Net benefit of the company in relaxing its credit policy. 7

7. (a) A company's capital structure consists of the following:

Particulars	Rs.
Equity Share of ₹ 100 each	40,00,000
Retained Earnings	10,00,000
9% Preference Shares	25,00,000
7% Debentures	25,00,000
	1,00,00,000

The company earns 12% on its employed capital. The tax rate is 35%.

The company requires a sum of ₹ 25 lakhs to finance its expansion programme for which following plans are available to it:

- (i) Issue 20,000 equity shares of ₹ 100 each at a premium of ₹ 25 per share; or
- (ii) Issue 10% preference shares; or
- (iii) Issue 8% debentures.

It is estimated that the price-earnings ratio in case of equity shares, preference shares and debentures financing would be 20, 17 and 16 respectively.

You are required to analyse each proposal and recommend the best plan. 7

- (b) Calculate operating leverage, financial leverage and combined leverage under Situation I and II in financial plans A & B from the following information relating to the operation and capital structure of a company.

Installed capacity – 2,000 units

Actual production and sales – 50% of the capacity

Selling price ₹ 20 per unit

Variable Cost ₹ 10 per unit

Fixed Cost:

Under Situation I ₹ 4,000

Under Situation II ₹ 5,000

Capital Structure:	Financial Plan	
	A (₹)	B (₹)
Equity	5,000	15,000
Debt (Rate of Interest 10%)	15,000	5,000
	20,000	20,000

Also comment on the most suitable financial plan. 7

8. (a) “A judicious use of data analytics is essential for implementation of lean finance which implies optimizing finance processes with reduced cost and increased speed, flexibility and quality.” – In this context, describe the abilities that a firm should achieve by transforming the information into a process for quality decision making. 7
- (b) Briefly discuss the various strategic steps to use data visualization in report design. 7
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