

**INTERMEDIATE EXAMINATION**

December 2025

**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) "Shareholders' wealth" of a company is represented by
- (A) the number of equity shares held by the shareholders of the company.
  - (B) the number of equity shares owned multiplied by the current market price per equity share.
  - (C) the amount of dividend paid to the shareholders.
  - (D) the market price per share of the company on the last day of each month.
- (ii) According to Horne and Wachowicz the greater the variability in returns, the \_\_\_\_\_ the security is said to be.
- (A) safe
  - (B) liquid
  - (C) riskier
  - (D) default
- (iii) If the nominal rate of interest is 12 per cent per annum and frequency of compounding is 4 i.e. quarterly compounding, the effective rate of interest will be \_\_\_\_\_.
- (A) 12.55% p.a.
  - (B) 12.75% p.a.
  - (C) 12.95% p.a.
  - (D) 13.05% p.a.
- (iv) \_\_\_\_\_ refers to the use of instruments under the control of central bank to regulate the availability, cost and use of money and credit.
- (A) Fiscal Policy
  - (B) Monetary Policy
  - (C) Credit Policy
  - (D) Banking Regulation
- (v) GDRs (Global Depository Receipts) are issued to
- (A) Foreign banks as a security to raise foreign currency loans.
  - (B) persons of Indian origin residing in a foreign country.
  - (C) Indian investors who want to subscribe to IPOs of foreign companies.
  - (D) non-resident investors against publicly traded shares of the issuing companies and denominated in dollars.

- (vi) A firm wants to increase its current ratio from 1.5:1 to 2:1. Which action would be most prudent from the viewpoint of a financial manager?
- (A) Delaying payment of wages and salaries
  - (B) Charging depreciation at higher rates for plant and machinery
  - (C) Making cash payment to creditors
  - (D) Selling obsolete furniture and fixture of the firm at cash
- (vii) MJ Ltd. provides you the following information where you have to calculate interest coverage ratio. Net profit after interest and tax is ₹ 2,10,000, rate of income tax is 30% and there is 15% debentures of ₹ 3,00,000.
- (A) 8.03 times
  - (B) 7.67 times
  - (C) 9.55 times
  - (D) 12.43 times
- (viii) If risk free rate of return is 8%, return on market portfolio is 12%, beta = 1.5, then the expected rate of return according to CAPM is equal to \_\_\_\_\_.
- (A) 10%
  - (B) 14%
  - (C) 18%
  - (D) 24%
- (ix) Which of the following cost of capital require tax adjustment?
- (A) Cost of equity shares
  - (B) Cost of preference shares
  - (C) Cost of retained earnings
  - (D) Cost of debentures
- (x) Kartikay Ltd. provides you the following information:  
Payback period is 3.76 years, discounted payback period is 3.95, present value of cash inflow is ₹15,83,892 and present value of cash outflow is ₹ 14,00,000.  
What is the profitability index of the project?
- (A) 1.13
  - (B) 1.05
  - (C) 1.83
  - (D) 1.95
- (xi) A project with an initial investment of ₹ 60,00,000 with life of 12 years, generates CFAT of ₹ 15,00,000 per annum. You have to calculate Payback reciprocal in percentage of the project.
- (A) 18 %
  - (B) 21 %
  - (C) 22 %
  - (D) 25 %

- (xii) In \_\_\_\_\_ records are maintained by the controlling department which reflects the physical movements of stocks and their current balance.
- (A) ABC analysis  
(B) economic order quantity  
(C) FSN analysis  
(D) perpetual inventory system
- (xiii) X Ltd. distributes its products to more than 500 retailers. The company's collection period is 35 days and it keeps its inventory for 15 days. The operating cycle would be \_\_\_\_\_.
- (A) 50 days  
(B) 35 days  
(C) 20 days  
(D) 15 days
- (xiv) The probability density function describes
- (A) the characteristics of a random variable.  
(B) the characteristics of a non-random variable.  
(C) the characteristics of a random constant.  
(D) the characteristics of a non - random constant.
- (xv) \_\_\_\_\_ is neither an IT nor a business skill set but exists as a separate field of expertise.
- (A) Data visualization  
(B) Data presentation architecture  
(C) Data mining  
(D) Data analytics

### 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 the term 'Repo'? Discuss its features. 7  
(b) Briefly discuss the process of data mining. 7
3. (a) Venus Co., listed in National Stock Exchange, provides the following information as extracted from its financial statements for the year 2024-25. A financial institution is interested in investing in the shares of the company and requires some ratios to be calculated.
- Dividend per share = ₹0.40  
Market price per share = ₹ 10.00  
Annual earning after interest and tax = ₹ 2,00,000  
Number of equity shares = 4,00,000  
Book Value per equity share = ₹ 30  
Face Value of each equity share = ₹ 2  
Number of Debentures = 1,00,000  
Face Value of each Debenture = ₹ 8

**Calculate:**

- (i) Dividend yield; (ii) Earnings Per Share (EPS); (iii) Price-Earnings (P/E) ratio;  
(iv) Payout Ratio; (v) Valuation Ratio; (vi) Return on Capital Employed (ROCE);  
(vii) Debt-Equity Ratio. 7

- (b) The following informations are extracted from the financial statements of X Ltd. for the years ended on 31st December, 2024 and 2025.

Particulars	31.12.2024 (₹)	31.12.2025 (₹)
Land (at cost)	18,00,000	16,00,000
Building	20,00,000	19,80,000
Machinery	15,00,000	18,00,000
Long-term Investments	90,000	2,10,000
Furniture	1,00,000	1,20,000

Additional information is available as follows:

- Depreciation charged on furniture during the year 2025 was ₹ 10,000.
- Depreciation charged on building was ₹ 20,000.
- Depreciation on machinery charged during the year 2025 was ₹ 25,000.
- Machinery, the book value of which was ₹ 80,000, was sold for ₹ 75,000 in 2025.
- Land was sold at a profit of ₹ 90,000 in 2025.

Calculate the net cash flow from investing activities in 2025. Show necessary workings. 7

4. (a) Complete the following Trend Analysis Statement of D Ltd. 7

Particulars	31/12/23 (₹)	31/12/24 (₹)	31/12/25 (₹)	31/12/23 (%)	31/12/24 (%)	31/12/25 (%)
Sales	10,000	15,000	20,000	100	?	?
Less: Cost of Goods Sold	7,000	?	?	100	125	200
Gross Profit	3,000	?	?	100	?	?
Less: Administrative Expenses	1,000	1,250	1,500	100	125	150
Finance Expenses	500	625	750	100	?	?
Selling Expenses	250	375	500	100	?	?
Net Profit before Tax	1,250	4,000	3,250	100	320	260
Less: Income Tax	250	800	1,000	100	?	?
Net Profit after Tax	1,000	3,200	2,250	100	320	225

- (b) Jai Ltd., having an ambitious plan for further expansion, is currently considering the possibility of raising ₹ 25,00,000 by issuing Equity Shares, Preference Shares and Debentures. The Book Value and Market Value of the sources are as follows:

Sources	Book Value (₹)	Market Value (₹)
Equity Shares	10,00,000	15,00,000
Preference Shares	5,00,000	6,00,000
Debentures	10,00,000	9,00,000
	<b>25,00,000</b>	<b>30,00,000</b>

Jai Ltd. provides you further information regarding the costs which are expected to be incurred on the above-mentioned issues of capital.

- (i) The equity share of the company is currently selling for ₹ 150. It is expected that the company will pay a dividend of ₹ 12 per share at the end of next year which is expected to grow at a rate of 7%. The company has to incur ₹ 2 per share as floatation cost.
- (ii) The 11%, ₹ 100 face value Preference share will be sold for ₹ 120. However, the company will have to pay ₹ 4 per share as underwriting commission.
- (iii) The company can sell a 10-year, ₹ 500 face value Debenture with a 9% rate of interest. An underwriting fee of 2% on issue price would be incurred on issue. Only interest is tax deductible.
- (iv) Corporate tax rate is 35%.

As a Cost and Management Accountant you have to calculate the weighted average cost of capital using Book Value Weights and Market Value Weights. 7

5. (a) Five Projects A, B, C, D and E are available to a company for consideration. The investment required for each project and the cash flows it yields are tabulated below. Projects B and E are mutually exclusive. Taking the cost of capital @ 10%, advice which combination of projects should be taken up for a total capital outlay not exceeding ₹ 3 lakhs on the basis of NPV? Assume that the projects are not divisible. 7

Project	Investment (₹)	Cash flow p.a. (₹)	No. of years	PVIFA @10%
A	50,000	18,000	10	6.145
B	1,00,000	50,000	4	3.170
C	1,20,000	30,000	8	5.335
D	1,50,000	40,000	16	7.824
E	2,00,000	30,000	25	9.077

(b) Following data has been available for a capital project:

Annual cash inflows	₹ 1,00,000
Useful life	4 years
Salvage value	0
Internal rate of return	12%
Profitability index	1.064

You are required to calculate the following for this project:

- Cost of project
- Cost of capital
- Net present value
- Payback period

PV Factors at different rates are given below:

Discount	12%	11%	10%	9%
1 Year	0.893	0.901	0.909	0.917
2 Years	0.797	0.812	0.826	0.842
3 Years	0.712	0.731	0.751	0.772
4 Years	0.636	0.659	0.683	0.708
Cumulative discount factor	3.038	3.103	3.169	3.239

6. (a) MJK Ltd. provides you the following information and you are required to prepare a statement showing Working Capital Requirements:

Estimates for the next year:	₹
Raw Material Cost	31,20,000
Wages	18,72,000
Overheads (including depreciation of ₹1,20,000)	7,44,000
Total Cost	<u>57,36,000</u>
Profit	<u>12,64,000</u>
Sales	<u>70,00,000</u>

Additional Information:

- Inventory norms: Raw Materials: 2 months, Work-in-progress: 3 weeks, Finished goods: 1 month
- 50% of the sales is for cash; for the remaining, 2 weeks credit is normal.
- The company enjoys 4 weeks credit facilities on only 30% of the purchases and lag in payment of overheads is one month.
- Lag in payment of wages is half month.
- Cash is to be held to the extent of 50% of current liabilities.

There is a regular production and sales cycle and wages and overheads accrue evenly. Material is introduced in the beginning of the production cycle.

- (b) Mritunjay Ltd. requires 90,000 units of a certain item annually. The cost per unit is ₹ 3, the cost per purchase order ₹ 300 and the inventory carrying cost ₹ 6 per unit per year. What is the Economic Order Quantity? Examine what will be Mritunjay Ltd.'s decision regarding the optimal quantity if the supplier, Anjali Ltd., offers discount as below: 7

For Order Quantity 4500-5999 units, discount is 2%; and  
For Order Quantity 6000 units and above, discount is 3%.

7. (a) Apex Ltd. provides you the following information:

Net operating income	₹75,000
Total investment	₹5,00,000
Cost of equity:	
If the firm uses no debt	15%
If the firm uses ₹ 2,00,000 debentures	18%
If the firm uses ₹ 3,00,000 debentures	20%

Assume that ₹ 2,00,000 debentures can be raised at 10% rate of interest whereas ₹ 3,00,000 debentures can be raised at 12% rate of interest. You are required to calculate the market value of the firm and the overall Cost of Capital using Traditional Approach. Which debt-equity mix should the company select? 7

- (b) Modern Chemicals Ltd. requires ₹ 25,00,000 for a new plant. This plant is expected to yield earnings before interest and taxes of ₹ 5,00,000. While deciding about the financial plan, the company considers the objective of maximizing earnings per share. It has three alternatives to finance the project—by raising debt of ₹ 2,50,000 or ₹ 10,00,000 or ₹ 15,00,000 and the balance, in each case, by issuing equity shares. Company's shares are currently selling at ₹ 150, but it is expected to decline to ₹ 125 in case the funds are borrowed in excess of ₹ 10,00,000. The funds can be borrowed at the rate of 10% up to ₹ 2,50,000 and at 15% for ₹ 2,50,001 up to ₹ 10,00,000 and at 20% for amount over ₹ 10,00,000. The tax rate applicable to the company is 50%. Analyse the EPS and advise which form of financing the company should choose. 7

8. (a) Discuss the core steps to be followed in transforming data into decision relevant information. 7
- (b) What do you mean by data analytics? Briefly discuss its steps. 7

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