INTERMEDIATE EXAMINATION

June 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 side indicate full marks.

Wherever 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 an unsystematic risk?

(A) Business risk

(B) Financial risk

(C) Default risk

(D) Market risk

(ii) _____ is a financial instrument whose value depends on the values of basic underlying variables.

(A) Derivatives

(B) GDR

(C) ECB

(D) FCCB

(iii) K Ltd.'s project with initial investment of ₹ 60 lakh and life of 10 years, generates CFAT of ₹ 12 lakh per annum. Calculate Payback Reciprocal of the K Ltd.'s project.

(A) 20%

(B) 25%

(C) 30%

(D) 40%

(iv) What is the key characteristic of commercial paper?

(A) Issued by individuals

(B) Unsecured, short-term debt instrument

(C) Backed by collateral

(D) Issued for more than 5 years

(v) A company has the following working capital details:

Inventory conversion period = 40 days

Receivable collection period = 30 days

Payable deferral period = 20 days

What is the Cash Conversion Cycle (CCC)?

(A) 40 days

(B) 50 days

(C) 60 days

(D) 70 days

(vi) ABC Ltd. is selling its products at ₹ 2 per unit. The variable cost of manufacturing has been estimated at 35% while the fixed cost at the present sales level of 1,00,000 units comes to ₹ 1,00,000. The firm has issued 14% debentures of ₹ 26,000. Calculate the financial leverage for the firm.

(A) 1.34

(B) 1.24

(C) 1.14

(D) 1.04

(vii) Given, EPS = ₹ 10; Cost of capital = 16%; Internal rate of return = 20% and Retention ratio = 40%. Calculate the price per share as per Gordon's Model.

(A) ₹ 60

(B) ₹ 75

(C) ₹ 90

(D) ₹ 105

(viii) Jai as an investor expects a perpetual sum of ₹ 10,000 annually from his investment. What is the present value of perpetuity if interest rate is 15%?

(A) ₹ 66,667

(B) ₹ 76,667

(C) ₹ 66,676

(D) ₹ 76,676

(ix) P Ltd. has earned 9% return on total assets of ₹ 50,00,000 and has a net profit ratio of 5%. The sales of the firm is _____.

(A) ₹ 4,00,000

(B) ₹ 2,50,000

(C) ₹ 90,00,000

(D) ₹ 83,33,333

(x) The MM model argues that dividend is irrelevant as

(A) the value of the firm depends upon earning power and not how the earnings are distributed.

(B) all investors buy shares to get capital gain only.

(C) dividend is payable only after deciding on the amount of retained earnings.

(D) the amount of dividend is only a small fraction of the market prices of shares.

(xi) The benefit of trading on equity can be enjoyed by a firm if

(A) the rate of interest > the rate of return of the firm.

(B) the rate of interest = the rate of return of the firm.

(C) the rate of interest < the rate of return of the firm.

(D) None of the above

(xii) Which of the following does not help to increase current ratio?

(A) Issue of debentures to buy stock

(B) Issue of debentures to pay creditors

(C) Sale of investments to pay creditors

(D) Avail bank overdraft to buy machine

(xiii) Algorithmic Trading is also known as

(A) Reinforcement Learning

(B) Anomaly Detection

(C) Fraud Detection

(D) Electronic DP

(xiv) _____ is any procedure that organizes data into a meaningful order to make it simpler to comprehend, analysis and visualize.

(A) Data Aggregation

(B) Data Analysis

(C) Data Sorting

(D) Data Reporting

(xv) _____ classifies data points depending on their closeness to and correlation with other accessible data.

(A) ANN algorithm

(B) CNN algorithm

(C) DNA algorithm

(D) KNN algorithm

SECTION – B

Answer *any five* questions from the following. Each question carries 14 marks. **14×5=70**

2. (a) Distinguish between Primary Market and Secondary Market. 7

(b) Explain the concept of Predictive Analytics. How does Predictive Analytics work? Give two examples of application of Predictive Analytics in specific industries. 7

3. (a) M Ltd. has the following earnings for the year ending on 31.03.2025.

Profit before tax	₹ 24,46,000
Tax rate	60%
Dividend for equity shareholders	20%
The capital structure of M Ltd. is as under:	
(i) Equity Shares: 30,000 shares of ₹ 100 each	₹ 30 lakh
(ii) 9% Preference Shares: 10,000 shares of ₹ 100 each	₹ 10 lakh
(iii) Reserve and Surplus as on 01.04.2024	₹ 22 lakh

From the above information you have to **calculate:**

(i) Earnings per share

(ii) Book value per share

(iii) Dividend payout ratio

(iv) Price earnings ratio

The current market price of the M Ltd.'s equity share is ₹ 200. 7

(b) **Calculate** Cash Flow from Operating Activities from the following:

Net Profit before tax	₹ 3,40,000
Items considered in determining the above Net Profit:	
Interest on long term borrowings	₹ 40,000
Depreciation	₹ 85,000
Amortization	₹ 50,000
Gain on sale of machinery	₹ 30,000

Balances of Current Assets and Current Liabilities were as follows:

Particulars	Opening Balance (₹)	Closing Balance (₹)
Trade Receivables	2,75,000	2,40,000
Trade Payables	1,90,000	2,00,000
Inventories	1,40,000	1,60,000
Prepaid Expense	20,000	25,000
Income received in advance	5,000	15,000

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4. (a) **Fill in the** missing information in the following Comparative Statement of Profit or Loss.

Sl. No.	Particulars	2022-23 (₹)	2023-24 (₹)	Absolute Change (₹)	% Change (₹)
I.	Revenue from operation				
II.	Add: Other Income	25,000		65,000	
III.	Total Revenue (I+II)				
IV.	Expenses:				
	a. COGS		6,00,000	2,00,000	
	b. Other expenses	25,000			60%
	Total expenses				
V.	Profit before tax (III – IV)				
	Less: Income Tax (30%)	60,000	75,000		
VI.	Profit after tax				

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(b) The present capital structure of a company is as follows:

Particulars	₹ (in lakh)
Equity Shares (Face value = ₹ 10)	240
Reserve and Surplus	360
11% Preference Shares (Face value = ₹ 10)	120
12% Debentures	120
14% Term Loans	360
	1,200

Additionally, the following information is available:

Company's equity bata — 1.06

Yield on long-term treasury bonds — 10%

Stock market risk premium — 6%

Current ex-dividend equity share price — ₹ 15

Current ex-dividend preference share price — ₹ 12

Current ex-interest debenture market value — ₹ 102.50 per ₹ 100

Corporate tax rate — 40%

The debentures are redeemable after 3 years and interest is paid annually. Ignoring flotation costs, calculate the company's weighted average cost of capital using market value weights. 7

5. (a) Jai & Karti Ltd. is considering three capital projects. The expected cash flows of the projects are as under:

Project	Year and Cash Flows			
	Y_0	Y_1	Y_2	Y_3
	₹	₹	₹	₹
Alfa	(1,00,000)	60,000	45,000	15,000
Beta	(80,000)	(20,000)	60,000	70,000
Gamma	(90,000)	(40,000)	80,000	86,000

* Amount in brackets represent cash outflows.

As a Cost and Management Accountant, you are required to calculate the NPV and PI of the above projects and suggest which project will be preferred by Jai & Karti Ltd. presuming a discount rate of 10% and present value of ₹ 1 at this rate being 0.909, 0.826 and 0.751 for the years 1, 2 and 3 respectively. 7

(b) XYZ Ltd. is considering the introduction of a new product. It is estimated that profits before depreciation and tax would increase by ₹ 2,40,000 each year for first four years and ₹ 1,20,000 each for the remaining six years. An advertisement cost of ₹ 40,000 is expected to be incurred in the first year, which is not included in the above estimate of profits. The cost will be allowed for tax purpose in the first year.

A new plant costing ₹ 4,00,000 will be installed for the production of the new product. The salvage value of the plant after its life of 10 years is estimated to be ₹ 80,000. A working capital investment of ₹ 40,000 will be required in the year of installing the plant and a further ₹ 30,000 in the following year. The company's tax rate is 30% and it claims written down value depreciation at $33\frac{1}{3}$% p.a. If the company's required rate of return is 20%, suggest whether the company should introduce the new product or not. Ignore tax effect on profit/loss on sale of asset.

PVIF of Re. 1.00 @ 20% is given below:

Year	1	2	3	4	5	6	7	8	9	10
PVIF	0.833	0.694	0.579	0.482	0.402	0.335	0.279	0.233	0.194	0.162

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6. (a) From the following information, calculate the amount of Net Working Capital for P Ltd.

Amount blocked up for stock:	**Figures for the year (₹)**
Stock of finished product	3,00,000
Stock of stores, materials, etc.	5,00,000
Average credit given:	
Inland sales - 4 weeks credit	2,60,00,000
Export sales - 1.5 weeks credit	65,00,000
Lag in payment of wages and other inputs:	
Wages - 1.5 weeks	24,00,000
Stock of materials, etc. - 1.5 months	3,60,000
Rent, Royalties, etc.- 6 months	80,000
Clerical staff - 1.5 months	6,00,000
Manager - ½ month	4,00,000
Miscellaneous expenses - 1.5 months	3,60,000
Payment in advance:	
Sundry Expenses (paid quarterly in advance)	6,00,000

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(b) H. Ltd. has a present annual sales level of 20000 units at ₹ 300 per unit. The variable cost is ₹ 200 per unit and the fixed costs amount to ₹ 6,00,000 per annum. The present credit allowed by the company is one month. The company is considering a proposal to increase the credit period to two months and three months and has made the following estimates:

Credit Policy	Existing	Proposed	
	1 Month	2 Months	3 Months
Increase in sales	---	15%	30%
Bad debts	1%	3%	5%

There will be increase in fixed cost by ₹ 1,00,000 on account of increase in sales beyond 15 per cent of present level. The company plans on a pre-tax return of 20 per cent on investment in receivables.

Analyse the proposed policies and identify the proposal to be selected. 7

7. (a) Y Ltd. has 100000 equity shares of ₹ 10 each fully paid. The company expects its earnings at ₹ 12,00,000 and Cost of Capital at 10% for the next financial year. Using Walter's Model, what dividend policy would you recommend when the Rate of Return on Investment of the company is estimated at 8% and 12%? Provide appropriate argument in support of your suggestion in the light of Walter's model. What will be the price of equity share if your recommendations are accepted? 7

(b) MJK Ltd. has the following summarized Balance Sheet and Income Statement:

Balance Sheet as on March 31, 2024

Liabilities	₹	Assets	₹
Equity Share Capital (₹10 per share)	8,00,000	Net Fixed Assets	10,00,000
10% Debentures	6,00,000	Current Assets	9,00,000
Retained Earnings	3,50,000		
Current Liabilities	1,50,000		
	19,00,000		**19,00,000**

Income Statement for the year ending March 31, 2024

Particulars	₹
Sales	3,40,000
Less: Operating expenses (including ₹ 55,000 depreciation)	1,20,000
EBIT	2,20,000
Less: Interest	60,000
Earnings Before Tax (EBT)	1,60,000
Less: Taxes	56,000
Net Earnings (EAT)	1,04,000

You have to determine the degree of operating, financial and combined leverages at the current sales level, if all operating expenses, other than depreciation, are variable costs. If total assets remain at the same level, but sales (i) increase by 20 per cent and (ii) decrease by 20 per cent, what will be the earnings per share in the new situations? 7

8. (a) Describe the various phases of digitization process in an organisation. 7

(b) In the context of data processing, briefly explain the following steps:

(i) Validation

(ii) Aggregation

(iii) Analysis

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