Mock Test Paper - Series I: March, 2025

Date of Paper: 12h March, 2025

Time of Paper: 2 P.M. to 5 P.M.

FINAL COURSE: GROUP – I

PAPER – 2: ADVANCED FINANCIAL MANAGEMENT

Time Allowed – 3 Hours **Maximum Marks – 100**

1. *The question paper comprises two parts, Part I and Part II.*
2. *Part I comprises Case Scenario based Multiple Choice Questions (MCQs)*
3. *Part II comprises questions which require descriptive type answers.*

PART I – Case Scenario based MCQs (30 Marks)

Part I is compulsory.

Case Scenario I

Mr. Ramesh, a 40-year-old investor, has invested ₹10,00,000 in an actively managed Equity Mutual Fund. The fund has an Expense Ratio of 2.50% and follows the Nifty 50 Index as its benchmark. Upon analyzing the Fund details, he comes across the concept of Tracking Error (TE) and finds out that the same Fund has a Tracking Error (TE) of 3.20%.

A few months later, Mr. Ramesh receives a notification that the Fund has implemented Side Pocketing. The Fund has an exposure of 15% of his investment in a debt instrument of XYZ Ltd, a company facing a severe financial crisis. Since XYZ Ltd has defaulted on its payments, the Fund Manager has moved this portion into a side pocket.

Following the decision of Fund Manager, Mr. Ramesh decides to reconsider any of the following option:

1. Should he stay invested in this Fund and wait for the Side-Pocketed assets to recover?
2. Should he switch to a Passive Index Fund that has a lower Tracking Error and lower Expense Ratio
3. Should he redeem his remaining liquid holdings and invest in a better-performing actively Managed Fund?

Based on the above scenario and given his current situation, choose the most appropriate answer for the following multiple-choice questions:

1. Is it necessary for investors to pay close attention to the Expense Ratio of a Mutual Fund because……..

   (A) a high expense ratio can significantly reduce net returns over time.

   (B) a higher expense ratio always guarantees better fund performance.

   (C) the expense ratio only matters in the first year of investment.

   (D) funds with higher expense ratios are always risk-free.

2. The Fund has been ……. in replicating return on Nifty 50.

   (A) Successful

   (B) Unsuccessful

   (C) Can't say

   (D) Data is insufficient

3. After the decision of Fund Manager for side-pocketing the equivalent portion of Mr. Ramesh's investment shall_____

   (A) remains illiquid until the Fund Manager decides to sell it or the company recovers.

   (B) be immediately written off, and the Mr. Ramesh loses that portion.

   (C) be returned to Mr. Ramesh in proportion to his holdings.

   (D) be moved into a different Mutual Fund Scheme with no risk.

4. If Mr. Ramesh switches to a Passive Index Fund with an expense ratio of 0.8%, then he will save annually compared to his current Expense Ratio of 2.50%?

   (A) ₹ 8,000

   (B) ₹ 10,000

   (C) ₹ 17,000

   (D) ₹ 18,000

5. The advantage for Mr. Ramesh to switch over to a Passive Index Fund shall be____

   (A) lower expense ratio and lower tracking error.

   (B) guaranteed recovery of side-pocketed assets.

(C) higher risk exposure compared to active funds.

(D) avoiding capital gains tax on redemption. **(5 x 2 = 10 Marks)**

Case Scenario II

On 20.10.2024, the credit balance of an Indian bank in NOSTRO account with LMN Bank in London was £ 1,60,000 and the overbought position was £ 1,00,000. During the day, the following transactions have taken place.

Events	Time	Amount (£)
DD Purchased	11:08	50,000
Purchased a bill on London	11:50	150,000
Sold forward TT	13:15	100,000
Forward purchased contract cancelled	13:55	50,000
Remitted by TT	14:45	85,000
Draft in London cancelled	15:00	40,000

Based on the above scenario, choose the most appropriate answer for the following multiple-choice questions:

6. How much was the total amount of purchase commitments made during the day by the Indian Bank?

   (A) £ 2,00,000

   (B) £ 1,50,000

   (C) £ 3,40,000

   (D) £ 50,000

7. The final cash balance in the NOSTRO account at the end of 20.10.24 stands at …….

   (A) £ 85,000

   (B) £ 75,000

   (C) £ 20,000

   (D) £ 160,000

8. The transaction took place at …….shall affect both exchange & cash position of the bank with LMN Bank.

   (A) 11:08

   (B) 11:50

(C) 14:45

(D) 15:00

9. If at the end of day bank is required to maintain a credit balance of £ 20,000 in the NOSTRO account, then it…….

(A) shall buy forward £ 15,000

(B) shall sell spot TT £ 55,000

(C) shall buy spot TT £ 55,000

(D) shall sell forward £ 55,000

10. If bank takes required steps to maintain a credit balance of £ 20,000 in the Nostro account, then what additional step was required to achieve the overbought position of £ 65,000?

(A) Buying forward £ 15,000

(B) Selling forward £ 65,000

(C) Buying forward £ 60,000

(D) Selling forward £ 15,000 **(5 x 2 = 10 Marks)**

Case Scenario III

Following Financial data are available for PQR Ltd. for the financial year ending 2023:

	(₹ in lakh)
8% Debentures	125
10% Bonds (2022)	50
Equity Shares (₹ 10 each)	100
Reserves and Surplus	300
Total Assets	600
Assets Turnovers ratio	1.1
Effective interest rate	8%
Effective tax rate	40%
Operating margin	10%
Dividend payout ratio	16.67%
Current market Price of Share	₹ 14
Required rate of return of investors	15%

From the information given above, choose the correct answer to the following questions:

11. Amount of retained earnings for the financial year 2023 approximately is……..

    (A) ₹ 26.00 lakh

    (B) ₹ 5.20 lakh

    (C) ₹ 52.00 lakh

    (D) ₹ 31.20 lakh

12. 10% Bonds must have been issued in the month of…….

    (A) July 2022

    (B) June 2022

    (C) August 2022

    (D) May 2022

13. Fair price of share of PQR Ltd. using Dividend Discount Model shall be approximately…….

    (A) ₹ 6.12

    (B) ₹ 6.51

    (C) ₹ 10

    (D) ₹ 14

14. Sustainable Growth Rate of PQR Ltd. shall be approximately……..

    (A) 10.00%

    (B) 6.50%

    (C) 15.00%

    (D) 7.80%

15. Return on Equity (ROE) of PQR Ltd. is……..

    (A) 7.80%

    (B) 6.50%

    (C) 10.00%

    (D) 15.00% **(5 x 2 = 10 Marks)**

PART – II DESCRIPTIVE QUESTIONS

Question No.1 is compulsory. Candidates are required to answer any four questions from the remaining five questions.

Working notes should form part of the answers.

Maximum Marks – 70 Marks

1. (a) Following are the details of a portfolio consisting of three shares:

Share	Portfolio weight	Beta	Expected return in %	Total variance
A	0.20	0.40	14	0.015
B	0.50	0.50	15	0.025
C	0.30	1.10	21	0.100

Standard Deviation of Market Portfolio Returns = 10%

You are given the following additional data:

Covariance (A, B) = 0.030

Covariance (A, C) = 0.020

Covariance (B, C) = 0.040

Calculate the following:

(i) The Portfolio Beta

(ii) Residual variance of each of the three shares

(iii) Portfolio variance using Sharpe Index Model

(iv) Portfolio variance (on the basis of modern portfolio theory given by Markowitz) **(8 Marks)**

(b) Consider a portfolio consisting of a ₹ 200,00,000 investment in share XYZ and a ₹ 2,00,00,000 investment in share ABC. The daily standard deviation of both shares is 1% and that the coefficient of correlation between them is 0.3. You are required to determine the 10-day 99% value at risk for the portfolio? **(4 Marks)**

(c) The pricing of securitized instruments is an important aspect of securitization. Explain this statement. **(2 Marks)**

2. (a) JKL Ltd. is considering a project for which the following estimates are available:

	₹
Initial Cost of the project	20,00,00,000
Sales price/unit	800
Cost/unit	500
Sales volumes	
Year 1	400000 units
Year 2	600000 units
Year 3	600000 units

Discount rate is 12% p.a.

You are required to measure the sensitivity (based on break-even approach) of the project in relation to each of the following parameters:

(i) Sales Price/unit

(ii) Unit cost

(iii) Sales volume and

(iv) Initial outlay

Notes:

(i) Taxation may be ignored.

(ii) PVF Table

Year	**1**	**2**	**3**
PVF @12%	0.893	0.797	0.712

(iii) Assume 360 days in a year. **(6 Marks)**

(b) The risk free rate of return Rf is 9 percent. The expected rate of return on the market portfolio Rm is 13 percent. The expected rate of growth for the dividend of Platinum Ltd. is 7 percent. The last dividend paid on the equity stock of firm A was ₹ 2.00. The beta of Platinum Ltd. equity stock is 1.2.

(i) What is the equilibrium price of the equity stock of Platinum Ltd.?

(ii) How would the equilibrium price change when changes (in absolute terms) in various parameters takes place as follows:

- The inflation premium increases by 2 percent and

- the expected growth rate increases by 3 percent and
- the equity beta of Platinum Ltd. rises to 1.3. **(4 Marks)**

(c) Explain the concept of "Cost of Carry" in Futures pricing. Also explain the term Contango and Backwardation markets. **(4 Marks)**

3. (a) On 1st April 2023 Fair Return Mutual Fund has 8,00,000 units and is having the following assets with (respective prices) at 4.00 p.m.

Shares	No. of Shares	Market Price Per Share (₹)
A Ltd.	20000	19.70
B Ltd.	100000	482.60
C Ltd.	20000	264.40
D Ltd.	200000	675.17
E Ltd.	60000	25.00

Required:

(i) Calculate NAV p.u. of the Fund on 1st April 2023.

(ii) Assuming that on 1st April 2023, Mr. X, a HNI, transfers an amount of ₹ 50,00,100 to the Fund and Fund Manager immediately purchases shares of E Ltd. and balance is held in bank.

Advice Fund Manger:

(A) number of units will be issued to Mr. X.

(B) The number of shares of E Ltd needs to be purchased if a cash balance of ₹ 4,76,000 is required to be maintained to meet some cash expenses.

(iii) Now suppose on 2 April 2023 at 4.00 p.m. the market price of shares is as follows:

Shares	₹
A Ltd.	20.30
B Ltd.	513.70
C Ltd.	290.80
D Ltd.	671.90
E Ltd.	44.00

Then what will be new NAV p.u.

Note: - Round off calculation upto 2 decimal points. **(6 Marks)**

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

The company has achieved break even this year and has an EBITDA of ₹ 90 crore. The unleveraged 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 risk free 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:

(₹ crore)

	Y1	**Y2**	**Y3**
Future Cash flows	100	120	150

The post-tax cost of debt is 8.40%. Assume a tax regime of 30%.

What is the potential value to be placed on X Pvt. Ltd?

Note: While PV Factors values to be rounded off to 3 decimal points the other calculations to be rounded off to 2 decimal points. **(4 Marks)**

(c) **Either**

Describe briefly the Dow Theory for technical analysis and how it classifies the market movements. **(4 Marks)**

(c) **Or**

Explain briefly the concept of the Efficient Frontier. If an investors portfolio is not efficient, then what action he/she should take as per this concept. (**4 Marks)**

4. (a) A multinational company is planning to set up a subsidiary company in India (where hitherto it was exporting) in view of growing demand for its product and competition from other MNCs. The initial project cost (consisting of Plant and Machinery including installation) is estimated to be US$ 500 million. The net working capital requirements are estimated at US$ 50 million. The company follows straight line method of depreciation. Presently, the company is exporting two million units every year at a unit price of US$ 80, its variable cost per unit being US$ 40.

The Chief Financial Officer has estimated the following operating cost and other data in respect of proposed project:

(i) Variable operating cost will be US $ 20 per unit of production;

(ii) Additional cash fixed cost will be US $ 30 million p.a. and project's share of allocated fixed cost will be US $ 3 million p.a. based on principle of ability to share;

(iii) Production capacity of the proposed project in India will be 5 million units;

(iv) Expected useful life of the proposed plant is five years with no salvage value;

(v) Existing working capital investment for production & sale of two million units through exports was US $ 15 million;

(vi) Export of the product in the coming year will decrease to 1.5 million units in case the company does not open subsidiary company in India, in view of the presence of competing MNCs that are in the process of setting up their subsidiaries in India;

(vii) Applicable Corporate Income Tax rate is 35%, and

(viii) Required rate of return for such project is 12%.

Assuming that there will be no variation in the exchange rate of two currencies and all profits will be repatriated, as there will be no withholding tax, estimate Net Present Value (NPV) of the proposed project in India.

Present Value Interest Factors (PVIF) @ 12% for five years are as below:

Year	1	2	3	4	5
PVIF	0.8929	0.7972	0.7118	0.6355	0.5674

(8 Marks)

(b) Details about portfolio of shares of an investor is as below:

Shares	No. of shares (lakh)	Price per share	Beta
A Ltd.	3.00	₹ 500	1.40
B Ltd.	4.00	₹ 750	1.20
C Ltd.	2.00	₹ 250	1.60

The investor thinks that the risk of portfolio is very high and wants to reduce the portfolio beta to 0.91. He is considering two below mentioned alternative strategies:

(i) Dispose off a part of his existing portfolio to acquire risk free securities, or

(ii) Take appropriate position on Nifty Futures which are currently traded at 8125 and each Nifty points is worth ₹ 200.

You are required to determine:

(1) portfolio beta,

(2) the value of risk free securities to be acquired,

(3) the number of shares of each company to be disposed off,

(4) the number of Nifty contracts to be bought/sold; and

(5) the value of portfolio beta for 2% rise in Nifty. **(6 Marks)**

5. (a) BA Ltd. and DA Ltd. both the companies operate in the same industry. The Financial statements of both the companies for the current financial year are as follows:

Balance Sheet

Particulars	**BA Ltd. (₹)**	**DA Ltd. (₹)**
Current Assets	14,00,000	10,00,000
Fixed Assets (Net)	10,00,000	5,00,000
Total (₹)	**24,00,000**	**15,00,000**
Equity capital (₹10 each)	10,00,000	8,00,000
Retained earnings	2,00,000	--
14% long-term debt	5,00,000	3,00,00
Current liabilities	7,00,000	4,00,000
Total (₹)	**24,00,000**	**15,00,000**

Income Statement

	BA Ltd. (₹)	**DA Ltd. (₹)**
Net Sales	34,50,000	17,00,000
Cost of Goods sold	27,60,000	13,60,000
Gross profit	6,90,000	3,40,000

Operating expenses	2,00,000	1,00,000
Interest	70,000	42,000
Earnings before taxes	4,20,000	1,98,00
Taxes @ 50%	2,10,000	99,000
Earnings after taxes (EAT)	**2,10,000**	**99,000**
Additional Information :		
No. of Equity shares	1,00,000	80,000
Dividend payment ratio (D/P)	40%	60%
Market price per share	₹ 40	₹ 15

Assume that both companies are in the process of negotiating a merger through an exchange of equity shares. You have been asked to assist in establishing equitable exchange terms and are required to:

(i) Decompose the share price of both the companies into EPS and P/E components; and also segregate their EPS figures into Return on Equity (ROE) and book value/intrinsic value per share components.

(ii) Estimate future EPS growth rates for each company.

(iii) Based on expected operating synergies BA Ltd. estimates that the intrinsic value of DA's equity share would be ₹20 per share on its acquisition. You are required to develop a range of justifiable equity share exchange ratios that can be offered by BA Ltd. to the shareholders of DA Ltd. Based on your analysis in part (i) and (ii), would you expect the negotiated terms to be closer to the upper, or the lower exchange ratio limits and why?

(iv) Calculate the post-merger EPS based on an exchange ratio of 0.4: 1 being offered by BA Ltd. and indicate the immediate EPS accretion or dilution, if any, that will occur for each group of shareholders.

(v) Based on a 0.4: 1 exchange ratio and assuming that BA Ltd.'s pre-merger P/E ratio will continue after the merger, estimate the post-merger market price. Also show the resulting accretion or dilution in pre-merger market prices. **(10 Marks)**

(b) TM Fincorp has bought a 6 x 9 ₹ 100 crore Forward Rate Agreement (FRA) at 5.25%. On fixing date reference rate i.e. MIBOR turns out be as follows:

Period	Rate (%)
3 months	5.50
6 months	5.70
9 months	5.85

You are required to determine:

(i) Profit/Loss to TM Fincorp. in terms of basis points.

(ii) The settlement amount.

(Assume 360 days in a year) **(4 Marks)**

6. (a) Closing values of NSE Nifty from 6th to 17th day of the month of January of the year 2020 were as follows:

Days	Date	Day	Sensex
1	6	THU	14522
2	7	FRI	14925
3	8	SAT	No Trading
4	9	SUN	No Trading
5	10	MON	15222
6	11	TUE	16000
7	12	WED	16400
8	13	THU	17000
9	14	FRI	No Trading
10	15	SAT	No Trading
11	16	SUN	No Trading
12	17	MON	18000

Calculate Exponential Moving Average (EMA) of Sensex during the above period. The previous day exponential moving average of Sensex can be assumed as 15,000. The value of exponent for 31 days EMA is 0.062.

Give detailed analysis on the basis of your calculations.

Note: - Round off final calculations upto 3 decimal points. **(6 Marks)**

(b) Sun Ltd. is planning to import equipment from Japan at a cost of 3,400 lakh yen. The company may avail loans at 18 percent per annum with quarterly rests with which it can import the equipment. The company has also an offer from Osaka branch of an India based bank extending credit of 180 days at 2 percent per annum against opening of an irrecoverable letter of credit.

Additional information:

Present exchange rate	₹ 100 = 340 yen
180 day's forward rate	₹ 100 = 345 yen

Commission charges for letter of credit at 2 per cent per 12 months.

Advice the company whether the offer from the foreign branch should be accepted. **(4 Marks)**

(c) Why do traditional lenders like banks hesitate to finance startup? List out what alternative financing options are available to entrepreneurs? **(4 Marks)**