

**Mock Test Paper - Series II: April 2025**

**Date of Paper: 5<sup>th</sup> April 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**

Zenith Capital, a boutique investment firm, manages portfolios for high-net-worth individuals (HNIs). Their lead portfolio manager, Mr. R, has been closely analyzing market trends to optimize returns for their fixed-income portfolio. Over the past few months, he has observed fluctuations in interest rates and anticipates a significant shift in the near future.

To optimise returns, Mr. R is considering three different investment strategies for clients having ₹ 10 crore of fund and are interested in Fixed Income Portfolio. Each strategy is designed to align with the client's risk appetite and future liquidity needs.

**Strategy A:** Investing the entire ₹ 10 crore in a single bond with a 7-year maturity to match a specific financial obligation in the future.

**Strategy B:** Allocating ₹ 5 crore in short-term bonds (1-year maturity) and ₹ 5 crore in long-term bonds (7-year maturity) to balance risk and return.

**Strategy C:** Spreading the ₹ 10 crore investment equally across bonds with maturities of 1 to 5 years to ensure periodic liquidity.

Meanwhile, Mr. R is also considering forecasting models to predict interest rate movements. He is evaluating economic indicators such as inflation, historical rate trends, and a combination of multiple economic factors to enhance the firm's forecasting accuracy.

Mr. R suggested Strategy B for Mr. H (a HNI) having a sum of ₹ 10 crore for investment in Fixed Income Portfolio. As per the strategy half amount on fund is proposed to be invested in 7-year bonds yielding 8% per annum and balance in 1-year short term bond yielding 6% per annum. Interest on these bonds is compounded annually.

Based on the above case scenario, choose the correct answer to the following questions:

1. What is the primary objective of an active bond portfolio strategy?
  - (A) To maintain a fixed return irrespective of market conditions
  - (B) To outperform the market by making informed investment decisions
  - (C) To minimize volatility and ensure steady returns
  - (D) To invest in government bonds only
2. If any HNI follows Strategy A, then .....of fixed-income portfolio strategy is being followed.
  - (A) Barbell Strategy
  - (B) Ladder Strategy
  - (C) Bullet Strategy
  - (D) Duration Matching
3. In the Barbell Strategy, the funds are typically allocated.....
  - (A) by making entire investment in bonds with the same maturity period.
  - (B) by dividing investment equally between short-term and long-term bonds.
  - (C) by dividing equal amount in bonds with different maturity periods.
  - (D) by investing only in short-term bonds.
4. In the ladder Strategy, the funds are typically allocated.....
  - (A) by making entire investment in bonds with the same maturity period.
  - (B) by dividing investment equally between short-term and long-term bonds.
  - (C) by dividing equal amount in bonds with different maturity periods.
  - (D) by investing only in short-term bonds.
5. It is expected that interest rate in coming 8 years are expected to fall by 25 bps each year and if Mr. H does not withdraw any amount from the Fund during these 7 years the total value of the investment at the end of the 7th year shall be approximately.....
  - (A) ₹ 15.036 crore
  - (B) ₹ 15.721 crore
  - (C) ₹ 15.739 crore
  - (D) ₹ 15.829 crore

**(5 x 2 = 10 Marks)**

**Case Scenario II**

An American institutional investor is exploring investment opportunities in different countries. Before proceeding, they believe a thorough analysis of options in the securities available to ensure a higher return while minimizing risk.

To achieve this objective, it formed a team consisting of following persons with respective assigned tasks:

**Mr. A** – He is entrusted with the task of analysing various Macro-economic factors e.g. historical performance of the economies in the past/ present and expectations in future, growth of different sectors of the economies in future with signs of stagnation/degradation at present. In addition to that he also analysed the trends in peoples' income and expenditure.

**Ms. B** – After receiving inputs/ recommendations from Mr. A she is entrusted with the task of assessment regarding all the conditions and factors relating to demand of the particular product, cost structure of the industry and other economic and Government constraints in the same country.

**Mr. C** – After receiving inputs/ recommendations from Ms. B he is entrusted with the task of careful examination of the company's quantitative and qualitative fundamentals. Which includes a comparison of price earning ratios of different companies. Further, In addition to examine the financial solvency, liquidity of the company he is also advised for the evaluation of future growth prospects of the company identified.

Based on the above case scenario, choose the correct answer to the following questions:

6. If Mr. A want to evaluate the impact of macroeconomic trends on their potential investment. Which of the following factors is least likely to influence their decision?
  - (A) Growth rates of national income
  - (B) Inflation rates
  - (C) Market speculation trends
  - (D) Barometer indicators
  
7. The investor learns that inflation is expected to rise. Based on economic analysis, how might this affect their stock investment decision?
  - (A) Stock prices are expected to decline due to reduced consumer demand
  - (B) Stock prices are expected to rise as stocks act as a hedge against inflation
  - (C) Stock prices will remain unaffected as inflation only affects bond markets

- (D) Stock prices will become highly volatile, but long-term growth remains unchanged
8. Which of the techniques shall be primarily used by Ms. B to carry out the required analysis at his part?
- (A) Anticipatory Surveys  
(B) Indicator Approach  
(C) Input-Output Analysis  
(D) Decision Tree Analysis
9. Mr. A while analyzing industry growth, finds that certain indicators tend to peak before the economy's overall growth. These indicators are best classified as.....
- (A) Lagging indicators  
(B) Leading indicators  
(C) Coincidental indicators  
(D) Random indicators
10. Specifically the team of Mr. A, Ms. B, and Mr. C are entrusted with the task of carrying out.....
- (A) Fundamental Analysis  
(B) Technical Analysis  
(C) Market Analysis  
(D) Security Analysis
- (5 x 2 = 10 Marks)**

**Case Scenario III**

Suppose you are a risk manager at a financial institution, and your company has loaned a significant amount of ₹ 500 crore to a company X Ltd. for a period of 3 years at 6-month at MCLR plus 200 bps. You are concerned about X Ltd.'s ability to repay the debt due to recent market volatility. To protect your institution from potential default, you decide to purchase a Credit Default Swap (CDS) from ABC Bank Ltd. for same notional amount at a premium quoted at 1% per year through cash settlement.

On the respective reset dates for the same period actual MCLR interest rate comes out as follows:

| Reset | MCLR  |
|-------|-------|
| 1     | 9.75% |

|   |        |
|---|--------|
| 2 | 10.00% |
| 3 | 10.25% |
| 4 | 10.35% |
| 5 | 10.50% |
| 6 | 10.60% |

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

11. The primary purpose of a Credit Default Swap (CDS) is.....
  - (A) to increase the value of bonds.
  - (B) to protect against default risk of a debt obligation.
  - (C) to provide guaranteed profit to the buyer.
  - (D) to create a new form of loan.
12. Which of the following statements is true about CDS contracts?
  - (A) CDS contracts cannot be used for speculation.
  - (B) CDS contracts are governed by government regulations.
  - (C) CDS contracts are private agreements between two parties.
  - (D) CDS contracts eliminate all risks for the buyer.
13. Which organization publishes the guidelines and rules for conducting Credit Default Swap transactions?
  - (A) Federal Reserve
  - (B) International Swap and Derivative Association (ISDA)
  - (C) Securities and Exchange Commission (SEC)
  - (D) World Trade Organization (WTO)
14. Assuming no default occurs the total premium your company will pay during the designated loan period shall be.....
  - (A) ₹ 5 crore
  - (B) ₹ 10 crore
  - (C) ₹ 15 crore
  - (D) ₹ 30 crore

15. Suppose if the lender defaults somewhere in the beginning of third year of loan (after payment of interest upto 2 years) and the market value of a reference loans falls to 75% of its par value, then ABC Bank will pay your company .....in a cash settlement.
- (A) ₹ 15 crore  
(B) ₹ 30 crore  
(C) ₹ 125 crore  
(D) ₹ 500 crore
- (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) Zaz plc, a UK Company is in the process of negotiating an order amounting €2.8 million with a large German retailer on 6 month's credit. If successful, this will be first time for Zaz has exported goods into the highly competitive German Market. The Zaz is considering following 3 alternatives for managing the transaction risk before the order is finalized.
- (i) Mr. Peter the Marketing head has suggested that in order to remove transaction risk completely Zaz should invoice the German firm in Sterling using the current €/£ average spot rate to calculate the invoice amount.
- (ii) Mr. Wilson, CE is doubtful about Mr. Peter's proposal and suggested an alternative of invoicing the German firm in € and using a Forward Contract to hedge the transaction risk.
- (iii) Ms. Karen, CFO is agreed with the proposal of Mr. Wilson to invoice the German first in €, but she is of opinion that Zaz should use sufficient 6-month Sterling Future contracts (to the nearest whole number) to hedge the transaction risk.

Following data is available

|   |                         |
|---|-------------------------|
| Spot Rate                                       | € 1.1960 - €1.1970/£    |
| 6-months forward points                         | 0.60 – 0.55 Euro Cents. |
| 6-month Future contract is currently trading at | € 1.1943/£              |

|  |            |
|--|------------|
| 6-month Future contract size is          | £62,500    |
| After 6-month Spot rate and Futures rate | € 1.1873/£ |

You are required to

- (A) Calculate (to the nearest £) the £ receipt for Zaz plc, under each of 3 above proposals.
- (B) In your opinion which alternative you consider to be most appropriate.

**(8 Marks)**

- (b) Calculate the value of share from the following information:

|   |                 |
|---|-----------------|
| Profit after tax of the company             | ₹ 290 crores    |
| Equity capital of company                   | ₹ 1,300 crores  |
| Par value of share                          | ₹ 40 each       |
| Debt ratio of company (Debt/ Debt + Equity) | 27%             |
| Long run growth rate of the company         | 8%              |
| Beta 0.1; risk free interest rate           | 8.7%            |
| Market returns                              | 10.3%           |
| Capital expenditure per share               | ₹ 47            |
| Depreciation per share                      | ₹ 39            |
| Change in Working capital                   | ₹3.45 per share |

**(4 Marks)**

- (c) Explain briefly the role of a Special Purpose Vehicle (SPV) in securitization?

**(2 Marks)**

2. (a) Following information is related to the 7.50% Convertible bond of S Ltd. which is currently priced at ₹ 5300 per bond:

- Conversion Parity Price = ₹ 265
- Conversion Premium (Based on Market Price) = 10.41667%
- Percentage of Downside Risk based on Straight Value of Bond = 12.766%

Required:

- (i) Calculate No. of shares on Conversion.
- (ii) Analyse Current Market Price Per Share of S Ltd.
- (iii) Assess the Straight Value of Bond.

- (iv) Based on straight value of bond computed above, determine the approximate required rate of return by an investor on similar category of bonds.

Note: Use following Present Value Factors (PVFs) for various calculations:

|                  | 1      | 2      | 3      | 4      | 5      |
|------------------|--------|--------|--------|--------|--------|
| <b>PVF @ 8%</b>  | 0.9259 | 0.8573 | 0.7938 | 0.7350 | 0.6806 |
| <b>PVF @ 10%</b> | 0.9091 | 0.8264 | 0.7513 | 0.6830 | 0.6209 |

**(6 Marks)**

- (b) Constant Engineering Ltd. has developed a high tech product which has reduced the Carbon emission from the burning of the fossil fuel. The product is in high demand. The product has been patented and has a market value of ₹ 100 Crore, which is not recorded in the books. The Net Worth (NW) of Constant Engineering Ltd. is ₹ 200 Crore. Long term debt is ₹ 400 Crore. The product generates a Net Operating Profit after Tax of ₹ 84 Crore. The rate on 365 days Government bond is 10 percent per annum. Market portfolio generates a return of 12 percent per annum. The stock of the company moves in tandem with the market.

Calculate Economic Value added of the company.

**(4 Marks)**

- (c) How can a company identify and manage counterparty risk effectively?

**(4 Marks)**

3. (a) A Mutual Fund is holding the following assets in ₹ Crores:
- |  |              |
|--|--------------|
| Investments in diversified equity shares | 90.00        |
| Cash and Bank Balances                   | <u>10.00</u> |
|  | 100.00       |

The Beta of the equity shares portfolio is 1.1. The index future is selling at 4300 level. The Fund Manager apprehends that the index will fall at the most by 10%. How many index futures he should short for perfect hedging? One index future consists of 50 units.

Substantiate your answer assuming the Fund Manager's apprehension will materialize.

**(4 Marks)**

- (b) Derivative Bank entered into a plain vanilla swap through on OIS (Overnight Index Swap) on a principal of ₹ 15 crores and agreed to receive MIBOR overnight floating rate for a fixed payment on the principal. The swap was

entered into on Monday, 31<sup>st</sup> July 2023 and was to commence on 1<sup>st</sup> August 2023 and run for a period of 7 days.

Respective MIBOR rates for Tuesday to Monday were:

8.12%, 7.75%, 7.95%, 8.10%, 8.12%, 8.15%

If Derivative Bank received ₹ 1420 net on settlement, calculate Fixed rate and interest under both legs.

**Notes:**

- (i) Sunday is Holiday.
  - (ii) Work in rounded rupees and avoid decimal working.
  - (iii) Consider 365 days a year **(6 Marks)**
- (c) Explain various strategies options available for foreign exchange exposure management. **(4 Marks)**

**OR**

- (c) What are the key factors that influence corporate-level strategy decisions? **(4 Marks)**

4. (a) Suppose that economy A is growing rapidly and you are managing a global equity fund and so far you have invested only in developed-country stocks only. Now you have decided to add stocks of economy A to your portfolio. The table below shows the expected rates of return, standard deviations, and correlation coefficients (all estimates are for aggregate stock market of developed countries and stock market of Economy A).

|   | Developed Country Stocks | Stocks of Economy A |
|---|--------------------------|---------------------|
| Expected rate of return (annualized percentage) | 10                       | 15                  |
| Risk [Annualized Standard Deviation (%)]        | 16                       | 30                  |
| Correlation Coefficient ( $\rho$ )              | 0.30                     |                     |

Assuming the risk-free interest rate to be 3%, you are required to determine:

- (i) What percentage of your portfolio should you allocate to stocks of Economy A if you want to increase the expected rate of return on your portfolio by 0.5%?

- (ii) What will be the standard deviation of your portfolio assuming that stocks of Economy A are included in the portfolio as calculated above?
- (iii) Also show how well the Fund will be compensated for the risk undertaken due to inclusion of stocks of Economy A in the portfolio comparing with investment in developed country's stocks only. **(8 Marks)**
- (b) On 1<sup>st</sup> April 2024, an open-ended scheme of mutual fund had 600 lakh units outstanding with Net Assets Value (NAV) of ₹ 37.50. At the end of April, it issued 12 lakh units at opening NAV plus 2% load, adjusted for dividend equalization. At the end of May, 6 Lakh units were repurchased at opening NAV less 2% exit load adjusted for dividend equalization. At the end of June, 70% of its available income was distributed.

In respect of April-June quarter of 2024, the following additional information are available:

|                              | ₹ in lakh |
|------------------------------|-----------|
| Portfolio value appreciation | 1701.88   |
| Income of April 2024         | 91.800    |
| Income for May 2024          | 137.700   |
| Income for June 2024         | 181.800   |

You are required to calculate:

- (i) Income available for distribution;
- (ii) Issue price at the end of April;
- (iii) Repurchase price at the end of May; and
- (iv) Net Asset Value (NAV) as on 30<sup>th</sup> June 2024.

**Note:** - Wherever required round off calculations upto 4 decimal points. **(6 Marks)**

5. (a) T Ltd. and E Ltd. are in the same industry. The former is in negotiation for acquisition of the latter. Important information about the two companies as per their latest financial statements is given below:

|                                    | T Ltd.   | E Ltd.  |
|------------------------------------|----------|---------|
| ₹ 10 Equity shares outstanding     | 12 Lakhs | 6 Lakhs |
| Debt:                              |          |         |
| 10% Debentures (₹ Lakhs)           | 580      | --      |
| 12.5% Institutional Loan (₹ Lakhs) | --       | 240     |

|   |        |        |
|---|--------|--------|
| Earning before interest, depreciation and tax (EBIDAT)<br>(₹ Lakhs) | 400.86 | 115.71 |
| Market Price/share (₹)  | 220.00 | 110.00 |

T Ltd. plans to offer a price for E Ltd., business as a whole which will be 7 times EBIDAT reduced by outstanding debt, to be discharged by own shares at market price.

E Ltd. is planning to seek one share in T Ltd. for every 2 shares in E Ltd. based on the market price. Tax rate for the two companies may be assumed as 30%.

Calculate and show the following under both alternatives - T Ltd.'s offer and E Ltd.'s plan:

- (i) Net consideration payable.
- (ii) No. of shares to be issued by T Ltd.
- (iii) EPS of T Ltd. after acquisition.
- (iv) Expected market price per share of T Ltd. after acquisition.
- (v) State briefly the advantages to T Ltd. from the acquisition.

Note: Calculations (except EPS) may be rounded off to 2 decimals in lakhs.

**(10 Marks)**

- (b) The market received rumour about ABC corporation's tie-up with a multinational company. This has induced the market price to move up. If the rumour is false, the ABC corporation stock price will probably fall dramatically. To protect from this an investor has bought the call and put options.

He purchased one 3 months call with a striking price of ₹ 42 for ₹ 2 premium, and paid Re.1 per share premium for a 3 months put with a striking price of ₹ 40.

- (i) Determine the Investor's position if the tie up offer bids the price of ABC Corporation's stock up to ₹ 43 in 3 months.
- (ii) Determine the Investor's ending position, if the tie up programme fails and the price of the stocks falls to ₹ 36 in 3 months. **(4 Marks)**

6. (a) XY Limited is engaged in large retail business in India. It is contemplating for expansion into a country of Africa by acquiring a group of stores having the same line of operation as that of India.

The exchange rate for the currency of the proposed African country is extremely volatile. Rate of inflation is presently 40% a year. Inflation in India is currently

10% a year. Management of XY Limited expects these rates likely to continue for the foreseeable future.

Estimated projected cash flows, in nominal terms, in India as well as African country for the first three years of the project are as follows:

|                                   | Year – 0 | Year – 1 | Year – 2 | Year – 3 |
|-----------------------------------|----------|----------|----------|----------|
| Cash flows in Indian ₹ (000)      | -200000  | -6600    | -10000   | -13000   |
| Cash flows in African Rands (000) | -800000  | +280000  | +550000  | +1000000 |

XY Ltd. assumes the year 3 nominal cash flows will continue to be earned each year indefinitely. It evaluates all investments using nominal cash flows and a nominal discounting rate. The present exchange rate is African Rand 6 to ₹ 1.

You are required to calculate the net present value of the proposed investment considering the fact that the company uses discounting rate of 10.80% to evaluate any project but to reflect high risk of this project it is considering to adjust a risk premium of 8.30%

**Note: -**

1. Use PV Factors upto 3 decimal points.
2. Use Exchange Rates upto 4 decimal points.
3. Compute final calculation in multiple of ₹`000 and round off them upto zero.
4. Ignore taxation. **(6 Marks)**

(b) A company is considering Projects X and Y with following information:

| Project | Expected NPV (₹) | Standard deviation |
|---------|------------------|--------------------|
| X       | 1,22,000         | 90,000             |
| Y       | 2,25,000         | 1,20,000           |

Required:

- (i) Which project will you recommend based on the above data?
  - (ii) Explain whether your opinion will change, if you use coefficient of variation as a measure of risk.
  - (iii) Which measure is more appropriate in this situation and why? **(4 Marks)**
- (c) What are the advantages of bringing Venture Capital in the company? **(4 Marks)**