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 **PRESIDENCY UNIVERSITY**

  **Bengaluru**

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| **End - Term Examinations – JANUARY 2025** |
| **Date:** 10 – 01- 2025 **Time:** 09:30 am – 12:30 pm |

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| **School:** SOM-PG | **Program:** MBA |
| **Course Code :** MBA3005 | **Course Name :** Investment Management |
| **Semester**: III | **Max Marks**: 100 | **Weightage**:50% |

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| **CO - Levels** | **CO1** | **CO2** | **CO3** | **CO4** | **CO5** |
| **Marks** |  | **52** | **26** | **22** |  |

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Do not write anything on the question paper other than roll number.*

**Part A**

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| **Answer ALL the Questions. Each question carries 3marks. 3Mx10Q=30M** |
| **1** | Mr. Sachin holds a portfolio with two stocks. Stock INFY has a beta of 1.2 and represents 60% of your portfolio, while Stock TCS has a beta of 0.8 and represents 40% of your portfolio. Compute the beta of Mr. Sachin portfolio. | **3 Marks** | **Knowledge** | **CO2** |
| **2** | A regression analysis of a stock's return on the market return yields an R² of 0.85. What does the R² value indicate about the stock’s return, and how should an investor interpret it? | **3 Marks** | **Knowledge** | **CO2** |
| **3** | Ms. Reshma, an investor is considering a stock with an expected return of 12%, a risk-free rate of 5%, and a beta of 1.5. The market return is 10%. Determine whether the stock is overvalued, undervalued, or fairly valued using the CAPM. | **3 Marks** | **Knowledge** | **CO2** |
| **4** | Mr. Suraj has a portfolio and it has a return of 15%, a standard deviation of 10%, and a risk-free rate of 5%. Calculate the Sharpe ratio for the portfolio and interpret its significance. | **3 Marks** | **Knowledge** | **CO2** |
| **5** | Ms. Anita is financial adviser and she is advising a client who prefers minimal trading in their portfolio. Differentiate between passive and active portfolio management strategies and suggest the best approach for the client. | **3 Marks** | **Knowledge** | **CO4** |
| **6** | The Infosys Limited (INFY) has issued a corporate bond has a face value of ₹ 1,000, an annual coupon rate of 8%, and a maturity period of 10 years. Recall any three characteristics of the bond. | **3 Marks** | **Knowledge** | **CO3** |
| **7** | Mr. Rao, a pension fund manager wants to immunize a portfolio of bonds against interest rate risk. List any three features of immunization of bond. | **3 Marks** | **Knowledge** | **CO3** |
| **8** | Ms. Lavi, an investor wants to evaluate a stock based on its intrinsic value, financial performance, and long-term growth prospects. Name any three examples of fundamental analysis.  | **3 Marks** | **Knowledge** | **CO4** |
| **9** | The Relative Strength Index (RSI) of a stock is above 70. What does this suggest about the stock’s price, and what action might traders take? | **3 Marks** | **Knowledge** | **CO4** |
| **10** | A stock is trading at ₹ 40. It paid a dividend of ₹ 3 last year, and dividends are expected to grow at 4% annually. Calculate the required rate of return. | **3 Marks** | **Knowledge** | **CO4** |

**Part B**

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| **Answer ALL the Questions. Each question carries 10 marks. 10Mx4Q=40M** |
| **11** | You are analyzing the stock of a company in the automobile sector. The government has announced a significant reduction in corporate tax rates, an increase in public spending on infrastructure, and lower interest rates. How would these macroeconomic factors impact the automobile sector's growth prospects and the stock's valuation? Discuss your approach to evaluate this company's performance. | **10 Marks** | **Application** | **CO4** |
| **Or** |
| **12** | Mr. Aman, the investor is deciding between two strategies: fundamental analysis for long-term investments and technical analysis for short-term trading. They are particularly interested in the IT sector. Explain the differences between these two approaches and discuss how each can be applied to analyze IT sector stocks. Provide examples of key tools or metrics specific to each method. | **10 Marks** | **Application** | **CO4** |

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| **13** | Reliance Industries Limited (RIL) dividends are expected to grow at 15% for 3 years, 100% for the next 4 years, and then stabilize at 4%. The last dividend paid was 5, and the required rate of return is 12%. Calculate the intrinsic value of the stock and give interpretation. | **10 Marks** | **Application** | **CO3** |
| **or** |
| **14** | Oil and Natural Gas Corporation (ONGC) Limited currently pays a dividend of 1.5, which is expected to grow at a constant rate of 6%. Determine the intrinsic value of the stock for required rates of return of:a) 8%b) 10% | **10 Marks** | **Application** | **CO3** |

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| **15** | Mirza International Limited issued a Bond and the Bond Details are:* Face Value: ₹1,000
* Annual Coupon Rate: 5%
* Years to Maturity: 3 years
* Yield to Maturity (YTM): 6% per annum

Calculate the Macaulay Duration of the bond and conclude the interpretation. | **10 Marks** | **Application** | **CO3** |
| **or** |
| **16** | Mr. Nachiket is a financial analyst tasked with determining the intrinsic value of a company, Alpha Ltd, using the Price-to-Earnings (P/E) ratio. You are provided with the following details:* Alpha Ltd's Earnings Per Share (EPS): ₹20
* Comparable Companies' P/E Ratios:
	+ Company A: 15
	+ Company B: 18
	+ Company C: 17
* Alpha Ltd has a similar growth trajectory, risk profile, and industry dynamics as the three companies mentioned above. Use the P/E approach to estimate Alpha Ltd's intrinsic stock price and justify your assumptions.
 | **10 Marks** | **Application** | **CO3** |

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| **17** | You are managing a portfolio with two stocks, X and Y, and you have the following data:* Stock X:
	+ Weight: 40%
	+ Standard Deviation: 18%
* Stock Y:
	+ Weight: 60%
	+ Standard Deviation: 12%
* Correlation Coefficient: 0.3

(a) Calculate the portfolio variance.(b) Calculate the portfolio standard deviation.(c) Interpret the impact of the correlation coefficient on the portfolio's risk. | **10 Marks** | **Application** | **CO2** |
| **Or** |
| **18** | Mr. Vasant is managing a portfolio consisting of two assets, **A** and **B**, with the following data:* **Stock A**:
	+ Weight: 50%
	+ Expected Return: 10%
* **Stock B**:
	+ Weight: 50%
	+ Expected Return: 8%

(a) Calculate the expected return of the portfolio.(b) If the expected returns of stocks A and B change to 12% and 6% respectively, how would the expected portfolio return change? | **10 Marks** | **Application** | **CO2** |

**Part C**

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| **Answer all the Questions. Each Question carries 15 marks. 15Mx2Q=30M** |
| **19** | As an investment analyst, you are tasked with evaluating the performance of two mutual funds, Fund A and Fund B, over the past year. You are required to use the following performance appraisal measures: Sharpe Ratio, Treynor Ratio, and Jensen’s Alpha. The relevant details are provided below:* Fund A:
	+ Portfolio Return: 12%
	+ Beta: 1.2
	+ Standard Deviation: 18%
* Fund B:
	+ Portfolio Return: 15%
	+ Beta: 1.8
	+ Standard Deviation: 24%
* Market Return: 10%
* Risk-Free Rate: 5%

(a) Calculate the Sharpe Ratio for both funds and interpret the results.(b) Calculate the Treynor Ratio for both funds and interpret the results.(c) Calculate Jensen’s Alpha for both funds and interpret the results.(d) Based on the results, recommend which fund performed better and why. | **15 Marks** | **Analysis** | **CO2** |
| **20** | The Capital Asset Pricing Model (CAPM) is a widely used method to estimate the required return on a security.You are provided the following data for three securities (X, Y, and Z):* Risk-Free Rate (Rf​): 5%
* Market Return (Rm​): 12%
* Betas (β):
	+ Security X: 1.2
	+ Security Y: 0.8
	+ Security Z: 1.5

Assume the actual returns of X, Y, and Z are 14%, 9%, and 20%, respectively. Using the Security Market Line (SML), determine whether each security is overvalued, undervalued, or fairly valued. | **15 Marks** | **Analysis** | **CO3** |