



UNIVERSITY OF RUHUNA
FACULTY OF MANAGEMENT AND FINANCE

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Total Marks : 70

BACHELOR OF BUSINESS ADMINISTRATION HONOURS DEGREE

Three Hours

3000 LEVEL FIRST SEMESTER END EXAMINATION – AUG/SEP 2025

FIN 31313 – Investment Analysis and Portfolio Management -I Academic Year 2024/2025

Instructions

- ➔ Answer all questions.
- ➔ Non-programmable calculators are allowed.

QUESTION 1

- (A) List two types of decisions to be made in constructing a portfolio. *(2 marks)*
- (B) Briefly explain the difference between top-down and bottom-up portfolio construction. *(2 marks)*
- (C) Discuss the difference between active and passive investment-management strategies using examples. *(3 marks)*
- (D) Discuss the risk–return trade-off. *(3 marks)*
- (E) Discuss two key factors that necessitate the presence of financial intermediaries in financial markets. *(4 marks)*

(Total 14 marks)

QUESTION 2

- (A) Briefly explain the naïve diversification. *(2 marks)*
- (B) Briefly explain the arbitrage pricing theory. *(2 marks)*
- (C) Explain the utility indifference curve using a graphical illustration. *(3 marks)*
- (D) Explain the efficient frontier for a set of risky securities using a graphical illustration. *(3 marks)*
- (E) A portfolio has an expected rate of return of 15% and a standard deviation of 20%. Treasury bills provide a risk-free return of 8.5%. Two investors, each with different levels of risk aversion: $A = 5$, $A = 2$, are considering these options. Explain how the differences in risk-aversion affect each investor's preference between investing in T-bills and the risky portfolio based on utility. *(4 marks)*

(Total 14 marks)

QUESTION 3

- (A) You have purchased a share for Rs. 60. If the price of this share after six months is Rs. 62 and cash dividends over the six months amount to Rs. 2.5, calculate the annualized return. *(2 marks)*
- (B) Explain why deviations from normality of asset returns are potentially significant and dangerous to ignore. *(2 marks)*

- (C) Distinguish between Value at Risk (VaR) and Expected Shortfall (Conditional VaR) in terms of what each measure captures about downside risk. *(3 marks)*
- (D) XYZ Bank offers a nominal annual interest rate of 12% compounded quarterly on a fixed deposit account. If ABC bank offers a nominal annual interest rate of 12% compounded monthly for the same account, show which bank provides a higher return using a suitable indicator? *(3 marks)*
- (E) An investor purchases a share at Rs. 60. The possible market conditions, along with their probabilities, expected share prices, and dividends, are summarized in the table below.

Market Condition	Probability	Share Price	Dividends
Excellent	0.15	75.50	2.5
Good	0.50	70.00	2.0
Poor	0.30	55.50	1.5
Crash	0.05	35.00	1.0

Based on this information, calculate the expected return and the standard deviation of the share. *(4 marks)*

(Total 14 marks)

QUESTION 4

- (A) The following information is on the five securities that comprise your portfolio.

Stock Symbol	Expected Return	Standard Deviation	Beta	Amount Invested (Rs. Million)
HBNF	21%	14%	1.4	4
BIL	14%	8%	1.0	3
JKH	19%	9%	0.7	2
SAMP	16%	11%	1.0	6
TKYO	20%	15%	1.1	5

- Which stock is riskier based on the portfolio context? *(1 mark)*
 - Compute the expected return on the portfolio. *(1 mark)*
 - Classify each stock in the portfolio as “aggressive,” “defensive,” or “neutral” based on its beta value. *(1 mark)*
 - Instead of investing in all of the above securities, you have decided to invest Rs. 14 million in JKH and Rs. 6 million in SAMP. If the returns on JKH and SAMP have a correlation coefficient of +0.25, compute the standard deviation of this two-asset portfolio. *(1 mark)*
 - Calculate and interpret the Sharpe ratio and the Treynor ratio of the portfolio in part (iv) (Risk Free rate = 8.00%, Portfolio beta is 0.79). *(3 marks)*
 - Briefly explain a strategy that you can use to reduce the overall risk of this portfolio in part (iv). *(2 marks)*
- (B) Briefly explain what happens to the Capital Allocation Line (CAL) if non-government investors are unable to borrow at the risk free rate. *(2 marks)*

- (C) You are given the following information about the returns of two stocks, X and Y, across different economic states.

State of the Economy	Probability	Returns of X	Return of Y
Excellent	0.1	25%	22%
Good	0.2	18%	17%
Normal	0.4	15%	14%
Poor	0.2	4%	5%
Crisis	0.1	-5%	-3%

Would you recommend including these two shares in an investment portfolio? Justify your answer (3 marks)

(Total 14 marks)

QUESTION 5

- (A) List two types of mortgages. (2 marks)
- (B) Briefly explain the difference between open-end funds and closed-end funds. (2 marks)
- (C) Briefly explain Exchange-Traded Funds (ETFs). (2 marks)
- (D) Briefly explain the key difference between a put option and a call option. (2 marks)
- (E) List three main characteristics of Gilt-Edged Funds. (3 marks)
- (F) Explain the unit investment trusts (UITs). (3 marks)

(Total 14 marks)

Equations

$$U = E(r) - \frac{1}{2} A\sigma^2$$

$$r_p = r_1 w_1 + r_2 w_2 + r_3 w_3 + \dots + r_n w_n$$

$$Cov_{xy} = \sum [(r_x - E(r_x)) (r_y - E(r_y)) \times P_i]$$

$$\sigma = \sqrt{\sum [(r_i - E(r_i))^2 \times P_i]}$$

$$\sigma_p = \sqrt{w_1^2 \sigma_1^2 + w_2^2 \sigma_2^2 + 2 w_1 w_2 \rho_{1,2} \sigma_1 \sigma_2}$$

$$Cor_{xy} = \frac{Cov_{xy}}{\sigma_x \sigma_y}$$

$$Trenyor Ratio = \frac{r_p - r_f}{\beta_p}$$

$$Sharpe Ratio = \frac{r_p - r_f}{\sigma_p}$$