OFFICE OF THE DEPUTY VICE CHANCELLOR
ACADEMICS, STUDENT AFFAIRS AND RESEARCH

UNIVERSITY EXAMINATIONS

2024/2025 ACADEMIC YEAR

FOUTH YEAR SECOND SEMESTER REGULAR/MAIN EXAMINATION

FOR THE DEGREE OF BACHELOR OF BUSINESS MANAGEMENT

COURSE CODE: BBM 413
COURSE TITLE: INVESTMENT & PORTFOLIO MANAGEMENT
DATE:10TH APRIL 2025 TIME: 2 TO 5 P.M

INSTRUCTION TO CANDIDATES

- SEE INSIDE

THIS PAPER CONSISTS OF 3 PRINTED PAGES PLEASE TURN OVER

REGULAR – MAIN EXAM

BBM 413: INVESTMENT AND PORTFOLIO MANAGEMENT

STREAM: BBM (Finance) **DURATION: 3 Hours**

INSTRUCTION TO CANDIDATES

i. Answer question ONE and any other TWO questions

ii. Do not write on the question paper.

QUESTION ONE

a) Portfolio construction is a critical component of the investment management process. The following was extracted from the statistical data of the Nairobi Securities Exchange (NSE) for the FY 2024 for the construction of a 4-asset stock, equally weighted, portfolio given a budget of KES 27,000,000.

STOCK	SEGMENT	DIVIDEND YIELD (%)	PRICE	BETA (5 Year)
Umeme ltd	Energy and Allied	19.33	16.5	0.13
KenGen	Energy and Allied	14.44	4.5	0.14
BAT	Agriculture	13.8	362	0.18
Willimson Tea	Banking	11.85	215	0.2
NCBA Group	Banking	10.89	50	0.24
Starndard Chartered Bank	Banking	10.86	289.75	0.24
Jubilee Holdings	Insurance	6	192	0.27
Kakuzi ltd	Agriculture	6	400	0.36

As of February 11, 2024, the 10-year Kenya government bond yield was 14.70%. According to data from the World Bank, the average return of the Nairobi Stock Exchange (NSE) in Kenya was around 18.41% in 2024.

Required;

i. Outline the portfolio selection and investment strategy (2 marks)

ii. Select the stocks to include in the portfolio on the basis of the strategy identified (4 marks)

iii. Show the allocation of investment of the fund budget to each assets selected (4 marks)

iv. Using CAPM calculate the Portfolio Expected Return (E_p) (10 marks)

b) Estimate, using linear regression, the Portfolio Beta given the following set of data for a given portfolio.

Year	Rm (%)	Treasury Bill Yields(%)	Return(%)
1	18.4	7.6	14
2	12	7.8	-0.9
3	18.1	7.7	10.7
4	15	7.9	7.9
5	17	8.8	7.9
6	18.9	9.2	-3
7	16.7	10.5	15.1
8	19.2	11.7	13.6
9	11.8	9.9	-4.4

(10 marks)

QUESTION TWO

a) Outline **FIVE** assumptions of the Harry-Markowitz Modern -Portfolio Theory (MPT) (10 marks)

b) An investor is presented with the following portfolios; X, Y and Z as follows;

Portfolio	Return (%)	Risk free rate(rf) (%)	Portfolio-Beta	Market return(Rm) (%)	SD((%)
X	12	8.5	0.24	16	5
Y	15	8.5	0.36	16	7.6
Z	9	8.5	0.14	16	6.2

Required; Evaluate the given portfolios using the following;

i. Sharpe measure (2 marks)
ii. Treynor measure (2 marks)
iii. Jensen alpha (2 marks)
iv. Explain the significance of the above measures to the investor (6 marks)

QUESTION THREE

a) Explain the risk –return trade off theory significance in relation to portfolio selection and construction (10 marks)

b) The following illustrates the market returns (M) and the returns from security (j)

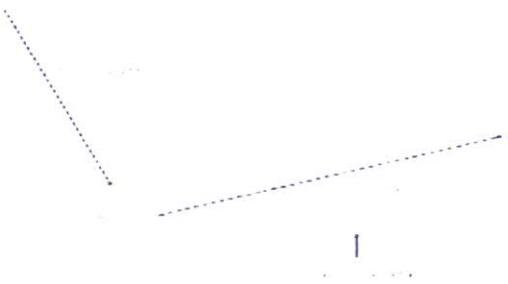
Time(T)	Returns Stock (j) %	Market returns (M) %
1	10	12

2	15	14
3	18	10
4	14	9
5	10	13

Required;
Calculate Beta and explain its importance in portfolio selection and construction analysis (10 marks)

QUESTION FOUR

a) Explain the following types of securities:
i.Fixed income securities (2 marks)
ii.Equity securities (2 marks)
iii. Derivative securities (2 marks)
b) Describe the following stock trading chart pattern, indicating the bear and bullish point (10 marks)



QUESTION FIVE

a) An investment firm manages a mutual fund and would like to calculate the net asset value for a single share. The investment firm is given the following information regarding its mutual fund:

- Value of securities in the portfolio: KES 75 million (based on end of day closing prices)
- Cash and cash equivalents of KES 15 million
- Accrued income for the day of KES 24 million
- Short-term liabilities of KES 1 million
- Long-term liabilities of KES 12 million
- Accrued expense for the day of KES 5,000
- 20 million shares outstanding

Required; The NAV of the fund (10 marks)

b)

The following illustrates the market returns (M) and the returns from security (j)

Time(T)	Returns Stock (j) %	Market returns (M) %

1	10	12
2	15	14
3	18	10
4	14	9
5	10	13

Required;

Calculate Beta and explain its importance in portfolio analysis (10 marks)