



**The Co-operative University of Kenya**  
**END OF SEMESTER EXAMINATION DECEMBER-2019**

**EXAMINATION FOR THE DEGREE OF BACHELOR OF CO-OPERATIVE**  
**BUSINESS**

**UNIT CODE: HCOB 2420**

**UNIT TITLE: PORTFOLIO & INVESTMENT ANALYSIS**

**DATE: DECEMBER, 2019**

**TIME:**

**INSTRUCTIONS:**

- Answer question **ONE (compulsory)** and any other **TWO** questions

**QUESTION ONE**

- (a) Illustrate the assumptions under capital Asset Pricing Theory and explain its application in capital asset pricing (5 marks)
- (b) The management of Kilima Sacco would like to diversify their investment portfolio, they have approached you for information about investment management process. Briefly discuss the investment management process (5 marks)
- (c) The fundamental objectives of debt management is to raise stable and low cost funding to meet the financial needs of the firm. Discuss (5 marks)
- (d) Mr. Njoroge is currently holding a portfolio consisting of shares of four companies quoted on the Nairobi securities Exchange as follows;

Company	Number of shares held	Beta equity Co-efficient	Market price Per share	Expected return on equity in the next year
A	20000	1.12	65	18%
B	30000	0.89	50	23%
C	30000	0.70	45	11%
D	20000	1.60	80	17%

The current market return is 14% per annum and the treasury bills yield is 7% per annum.

**Required:**

- i) Calculate the risk of Njoroge's portfolio relative to that of the market (5 marks)
- ii) Explain whether or nor Njoroge should change the composition of his portfolio (4 marks)
- (e) Explain the difference between
- i) Money market and capital market
- ii) Primary market and secondary market
- (f) What factors might an individual investor take into account in determining his/her investment policy (2 marks)

**QUESTION TWO**

- (a) The risk free rate is 10% and the expected return on the market portfolio is 15%. The expected return for 4 securities and listed below together with their expected betas

Security	Expected return	Expected Beta
A	17.0%	1.3
B	15.4%	0.8
D	15.5%	1.1
C	18.0%	1.7

**Required**

- i) On the basis of these expectations, which securities are overvalued? Which are undervalued? Which are undervalued (10 marks)

- ii) If the risk-free rate were to rise to 12% and the expected return on the market portfolio rose to 16%. Which securities would be overvalued? Which would be undervalued. (Assume expected return and the betas remain the same)  
(10 marks)

### QUESTION THREE

- (a) Mr Charles Kabazi has a capital of Kshs 1,000,000 which he wishes to invest in different sectors of the economy, Agriculture, Service and Manufacturing. The fund will be allocated as follow:

	Amount invested Kshs
Agriculture	400000
Service	200000
Manufacturing	400000

Details on the possible future economic states their probabilities of occurrence and the expected return for each of the sectors are presented below:

Possible future State	Probability of occurrence	% Expected return of investment sector		
		Agriculture	Securities	Manufacturing
Recession	0.4	16	14	23
Average	0.3	14	19	15
Boom	0.3	20	22	16

#### Required:

- Determine the risk associated with the investment in each of the three sectors above (9 marks)
- Determine the expected portfolio return (5 marks)
- Determine the expected portfolio risk (6 marks)

### QUESTION FOUR

- Highlight the importance of holding a portfolio (5 marks)
- With the help of a diagram illustrate the relationship between the age of an investor and the investment objective (15 marks)

### QUESTION FIVE

- With the help of a diagram distinguish between an efficient portfolio and an optimum portfolio (6 marks)
- Mr. Patel has an investment of kshs 1,000,000. He wishes to invest in two securities A and B in the following proportion Kshs 200,000 in securities A and Kshs 800000 in security B. The return on these two securities depend on the state of the economy as shown below

State of probability		Return on Security A	Return on Security B
Boom	0.4	18%	24%
Normal	0.5	14%	22%
Recession	0.1	12%	21

#### Required:

- Computer the expected portfolio return (2 marks)
- Determine the correlation coefficient between security A and Security B (6 marks)
- Calculate the portfolio risk (2 marks)
- Calculate the reduction in risk duet to portfolio diversification(Optimum portfolio) (4 marks)