

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

RESIT/SPECIAL EXAMINATION

THIRD YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF PURCHASING AND SUPPLIES MANAGEMENT

BBAM 301/BPSM 301: INVESTMENT MANAGEMENT

STREAMS: BPSM Y3S1

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 12/09/2018

2.30 P.M. – 4.30 P.M.

INSTRUCTIONS:

- Answer Question ONE and any other TWO questions
- Show all your workings
- Do not write on the question paper

QUESTION ONE

(a) Explain the meaning of security analysis (2 marks)

(b) Explain the following terms as they apply to analysis of securities for investment

(i) A portfolio (2 marks)

(ii) Technical analysis (2 marks)

(iii) Fundamental Analysis (2 marks)

(c) After thorough analysis of returns on two stocks, A and B, you develop the following opinion:

State of nature	Probability	Returns %	
		A	B
1	0.2	-10	5
2	0.4	25	30
3	0.3	20	20
4	0.1	10	10

Required: Calculate

- (i) Expected return for each stock (4 marks)
- (ii) The standard deviation on each stock (6 marks)
- (iii) correlation coefficient of the returns on stock A and stock B (6 marks)
- (iv) suppose you want to put 60% of your investment in stock A and the rest in stock B. calculate the expected return and risk of the portfolio (6 marks)

QUESTION TWO (20 marks)

- (a) Explain price risk and interest risk under bond investment (6 marks)

- (a) Explain the following terms as used in the options models
 - (i) Strike Price [2 marks]
 - (ii) European Option [2 marks]
 - (iii) Out-of-the-Money [2 marks]

- (b) (i) Compute call option price by applying Black Scholes option pricing model on the following values

Current market price of the share: Sh.75
 Variance of the underlying stock 0.2025
 Exercise price Sh.80
 Risk-free rate 0.12
 Time to expiration 6 months

(4 marks)

- (ii) What are the underlying assumptions of Black-scholes options pricing model? (4 marks)

QUESTION THREE

- a) Using examples, distinguish between systematic and unsystematic risk (4 marks)
- b) An investor is evaluating four portfolios with the following characteristics

Portfolio	Portfolio expected Return (%)	Portfolio Standard Deviation
1	19	8
2	25	12
3	16	6
4	22.5	10

The expected return on the market portfolio is 12% with an accompanying standard deviation of 4%. The risk free rate of interest is 5%

Required:

- i. Use Capital Market line to identify whether the portfolios are fairly priced (8 marks)
- ii. In case of an efficient portfolio in (i) above state what the standard deviation should be for efficiency to be achieved at the given expected return (2 marks)
- (c) Explain the efficient Market Hypothesis (EMH) (6 marks)

QUESTION FOUR

- a) Describe the following investment securities
 - (i) Treasury bill (2 marks)
 - (ii) Corporate bond (2 marks)
 - (iii) Municipal bond (2 marks)
 - (iv) Derivatives (2 marks)

(b) An investor is evaluating three portfolios with the following characteristics:

Portfolio	Portfolio Estimated return %	Portfolio Beta
1	16%	1.2
2	14%	0.8
3	13.5	0.9

The expected return on the market portfolio is 14.5% . The risk-free rate of interest is 4.5%.

Required:

Use the Capital Market Pricing Model to identify which among the above portfolios are efficient or inefficient. (6 marks)

(c) Securities ABC and XYZ have the following historical dividend and price data

Year	Stock ABC		Stock XYZ	
	Dividend Sh	Year-end Price Sh	Dividend Sh	Year-end Price Sh
2000		12.25	-	22.00
2001	1	9.75	2.40	18.50
2002	1.05	11.0	2.60	19.50
2003	1.15	13.75	2.85	25.25
2004	1.3	13.25	3.05	22.50
2005	1.5	15.05	3.25	24.00

- (d) Calculate the average returns on each security (4 marks)
- (e) Calculate the portfolio return for a Sh.3million investment in stock ABC and sh.7 million in XYZ. (2 marks)