

CHUKA



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UNIVERSITY EXAMINATIONS RESIT/SPECIAL EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF COMMERCE

BCOM 433/435: INVESTMENT AND PORTFOLIO MANAGEMENT

STREAMS:

TIME: 2 HOURS

DAY/DATE: THURSDAY 26/07/2018

2.30 P.M – 4.30 A.M

INSTRUCTION:

- **Answer question one and any other two questions**

1. (a) Explain the term security analysis and describe two approaches to security analysis.

[6marks]

(i) By the use of a diagram, describe the efficient frontier for selection of a portfolio of two risky assets as presented by Markowitz (1952)

(b) Two stocks, A and B have the following probability distribution of returns.

Economic growth conditions	Probability	Returns %	
		A	B
High	0.1	32	30
Normal	0.2	20	17
Slow	0.4	14	6
Stagnation	0.2	-5	-12
Decline	0.1	-10	-16

Required : Calculate

- (i) The standard deviation on each stock [6marks]
 (ii) Correlation coefficient of the returns on stock A and stock B. [4marks]

(iii) What percentage investment in each stock would yield lowest risk for a portfolio made up of stock A and stock B? [4marks]

(c) An investor holds 5000 shares in SGL ltd, a listed company at the Johannesburg stock exchange. The company has had the following dividend pattern:

Year	2011	2012	2013	2014	2015
DPS(R.s)	1.5	1.8	2.2	2.6	2.9

If the required rate on return on equity is 20% determine the theoretical value of his investment in SGL ltd assuming constant growth rate in perpetuity. [5marks]

2. (a) The fact not the entire risk of a portfolio can be diversified away, no matter how many securities are included. Makes it possible to divide the risk factors in to two groups

System and non systematic risk. Discuss [6marks]

(b) A portfolio consists of three securities P,Q and R with the following parameters:

	P	Q	R	Corr.
Expected return %	25	22	20	
Standard deviation %	30	26	24	
P Q				-0.5
QR				0.4
PR				0.6

If the securities are equally weighted, calculate the expected return and standard deviation of the portfolio of these three securities. [4marks]

(b) An investor is evaluating three portfolio 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: present the assumption that are needed to be made when applying the CAPM.

[4marks]

3. (a) Explain price risk and interest risk under bond investment. [4marks]

(b) Distinguish between active and passive portfolio revision strategies. [2marks]

(b) Velma is considering investing in a bond currently selling for ksh 8785.07. The bond has four years to maturity ksh 10,000 face value and 8% coupon rate. The next annual interest payment is due year from today. The approximate discount factor for investments of similar risk is 10%. Calculate the intrinsic value of the bond and state whether velma should purchase the bond? [4marks]

(i) A 5 year bond face value of ksh 100 has a coupon rate of 10%. The market interest rate is 12%. The bond is redeemable at par after 5 years, calculate the bond's duration.

[4marks]

(ii) Two portfolios were constructed one consisting of shares and the other consisting of bonds. The market capitalization of equity shares at the time of constructing the portfolio was ksh 60,000 at a rate of ksh per share and that of bonds (defensive portfolio) was ksh 40,000 which represents the investment made. The investor opts to use constant shilling value plan a and fixes a revision point of 10%. The share prices show fluctuations at periodical interval as under:

Period	Share price ksh
1	100 (at the time of portfolio construction)
2	90
3	85
4	75

Determine the total portfolio value after revision at the end of period 4. [4marks]

4. (a) Outline the features of the following investment securities

(i) Treasury bill [2marks]

(ii) Corporate bond [2marks]

(iii)Municipal bond [1mark]

(c) During the last 10 year period, the average annual rate of return on the NSE (Market Portfolio) was 14% and the average annual rate of return on a 363 day T-bill was 8% . As an administrator of a large pension fund, you are indifferent on whether to renew investment contract with each of the three fund managers that are currently offering investment service to the pension fund. You have gathered the following information:

Investment manager	Average annual rate of return	Beta of the portfolio	Standard deviation of the portfolio
W	12%	0.90	1.8%
X	16%	1.05	2.2%
Y	18%	1.20	2.3%

The standard deviation of the market portfolio is 2%.

Required :

Evaluate the performance of the managers using sharpe, Treynor and Jensen measures.

[9marks]

(d) Explain three levels of informational efficient market hypothesis. [6marks]