KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF ECONOMICS

EAE 816: CORPORATE FINANCE AND INVESTMENT 1

DATE: Friday 19th May 2017 **TIME: 9.00a.m-12.00p.m**

INSTRUCTIONS:

1. **Answer ALL questions**
2. **Each questions carries 15 marks**

QUESTION ONE (15 marks)

a) Sort out the nuances of the following maze of models. (4 marks)

i) CAPM

ii) Single-factor model

iii) Single-index model

iv) Market model

b) Stock XYZ has an expected return of 12% and risk of $\beta = 1$. Stock ABC has expected return of 13% and $\beta = 1.5$. The market's expected return is 11% and $r_f = 15\%$.

i) According to the CAPM, which stock is a better buy? (4 marks)

ii) What is the alpha of each stock? Plot the SML and each stock's risk-return point on one graph. Show the alphas graphically. (7 marks)

QUESTION TWO (15 MARKS)

Consider a firm whose debt has a market value of $40 million and whose stock has a market value of $60 million (3 million outstanding shares of stock, each selling for $20 per share). The firm pays a 5 percent rate of interest on its new debt and has a beta of 1.41. The corporate tax rate is 34 percent. (Assume that the security market line (SML) holds, that the risk premium on the market is 9.5 percent [somewhat higher than the historical equity premium], and that the current Treasury bill rate is 1 percent.)

(a) What is this firm's R_{WACC}? (10 marks)

(B) Present your summary calculations in a table form. (5 marks)

QUESTION THREE (15 MARKS)

Consider the following information about three stocks:-

State of Economy	Probability of State of Economy	Rate of Return if State Occurs		
		Stock A	Stock B	Stock C
Boom	0.35	0.20	0.35	0.60
Normal	0.40	0.15	0.12	0.05
Burst	0.25	0.01	-0.25	-0.50

(a) Suppose your portfolio is invested 40 percent each in A and B, and 20 percent in C. Calculate the following:-

i) The portfolio expected return (3 marks)

ii) The variance (6 marks)

iii) The standard deviation (1 marks)

(b) If the expected T-bill rate is 3.80 percent, what is the expected risk premium on the portfolio? (2 marks)

(c) If the expected inflation rate is 3.50 percent, what are the approximate and exact expected real returns on the portfolio? What are the approximate and exact real risk premium on the portfolio? (3 marks)

QUESTION FOUR (15 marks)

a) ICEA (K) Ltd has just paid a cash dividend of $2 per share. Investors require a 16 per cent return on investments such as this. The divided is expected to grow at a steady rate of 8 per cent per year.

Required:

i) Compute the current value of the equity? (2 marks)

ii) What will the equity be worth in five years? (2 marks)

INVOLVEMENT IN ANY EXAMINATION IRREGULARITY SHALL LEAD TO ***DISCONTINUATION***

b) Explain the difference between a coupon rate and a yield to maturity. Show using examples, how changing the coupon rate and yield to maturity affects the bond price. (2 marks)

c) Equity Bank of Kenya bond has a 10 per cent coupon rate and a Ksh. 1,000 face value. Interest is paid semi-annually, and the bond has 20 years to maturity. Suppose investors require 12 per cent yield.

Required:

i) Calculate the bond's value (2 marks)

ii) What is the effective annual yield on the bond? (2 marks)

d) State the six components that make up the bond's yield. (3 marks)

e) What is the term structure of interest rates? What determines its shape? (2 marks)