KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF COMMERCE

BAC 816: THEORY OF FINANCE

DATE: Tuesday, 21st November 2017 **TIME: 5.30 p.m. - 8.30 p.m.**

INSTRUCTIONS:

ANSWER ALL QUESTIONS

QUESTION ONE

a) Briefly discuss the implications of the efficient market hypothesis for investment analysis as it applied to:

i) Technical analysis in the form of charting. (4 Marks)

ii) Fundamental analysis (4 Marks)

b) You can only invest in two securities: ABC and XYZ. The correlation between the returns of ABC and XYZ is 0.2. Expected returns and standard deviations are as follows:

Security	E[R]	δ (R)
ABC	20%	20%
XYZ	15%	25%

i) It seems that ABC dominates XYZ. Would anyone ever invest in XYZ? Why? (2 Marks)

ii) What is the expected return and standard deviation of a portfolio that invests 60% in ABC and 40% in XYZ? (4 Marks)

iii) Suppose instead that you want your portfolio to have an expected return of 19.5%. What portfolio weights do you select now? What is the standard deviation of this portfolio? (4 Marks)

QUESTION TWO

a) Briefly explain two weaknesses and two strengths of:

i) The APT (4 Marks)

ii) The CAPM (4 Marks)

b) You have been assigned the task of estimating the expected returns for three different stocks: QRS, TUV and WXY. Your preliminary analysis has established the historical risk premiums associated with three risk factors that could potentially be included in your calculations: the excess return on a proxy for the market portfolio (MKT), and two variables capturing general macroeconomic exposures (MACRO1 and MACRO2). These values are:

$\lambda_{MKT} = 7.5\%$, $\lambda_{MACRO1} = 0.3\%$, AND $\lambda_{MACRO2} = 0.6\%$. You have also estimated the following factor betas (i.e, loading) for all three stocks with respect to each of these potential risk factors:

	FACTOR LOADING		
STOCK	**MKT**	**MACRO 1**	**MACRO 2**
QRS	1.24	-0.42	0
TUV	0.91	0.54	0.23
WXZ	1.03	-0.09	0

QUESTION THREE

The Blue Company has three divisions, each of approximately the same size. The financial staff has estimated the rates of return for different states of nature as given below:

			Division Rate of Return		
State of the world	**Subjective probability**	**Market return**	**Division 1**	**Division 2**	**Division 3**
Great	0.25	0.35	0.40	0.60	0.20
Good	0.25	0.20	0.36	0.30	0.12
Average	0.25	0.13	0.24	0.16	0.08
Horrible	0.25	-0.08	0.00	-0.26	-0.02