



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF BUSINESS & ECONOMICS
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF BUSINESS
ADMINISTRATION WITH IT
3RDYEAR 2ND SEMESTER 2018 ACADEMIC YEAR
KISII CAMPUS-PART TIME

COURSE CODE: ABA 320

COURSE TITLE: INVESTMENT AND PORTFOLIO MANAGEMENT

EXAM VENUE: STREAM: (BBA)

DATE: EXAM SESSION:

TIME: 2 HOURS

Instructions:

- 1. Answer Question ONE (COMPULSORY) and ANY other 2 questions**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

QUESTION ONE

- a. Identify and explain three types of efficiency. [6mks]
- b. By the aid of a diagram, explain the three risk behaviours among managers. [6mks]
- c. Mr. K. Patel has an investment capital of sh. 1M; he wishes to invest in securities A and B in the following proportion. Sh. 200000 in security A and sh. 800000 in security B. The returns of the two securities depend on the state of the economy as shown below.

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

Required:

- i. Compute the expected portfolio return. [5mks]
- ii. Determine the correlation coefficient between security A and B. [5mks]
- iii. Calculate the portfolio risk. [2mks]
- iv. Calculate the reduction in risk due to portfolio diversification. [2mks]
- d. Identify the differences between CAPM and Portfolio theory. [4mks]

QUESTION TWO

- a. Identify five limitations of portfolio theory. [5mks]
- b. Consider the following four portfolio

Portfolio	Rp (%)	S.D	CML
A	15	5	11
B	13	6	12
C	10	7	13
D	16	10	16

If the market return is 10% with standard deviation = 4 and $R_f = 6\%$ determine which PF are efficient, and which are not. [8mks]

- c. Identify and explain briefly the assumptions of portfolio theory. [5mks]
- d. Distinguish between systematic and unsystematic risk. [2mks]

QUESTION THREE

- a. Your rate of return expectations for the stock of Kenya Airways company during the next year are:-

Rate of return	probability
-0.60	0.15
-0.30	0.15
0.20	0.40
0.40	0.20
0.80	0.10

Required:

Calculate the expected return on this stock, the variance and its standard deviation. [8mks]

- b. Under what condition can the standard deviation be used to measure the relative risk of two investments. [3mks]
- c. Under what condition the coefficient of variation must be used to measure the relative risk of two investments. [3mks]
- d. Explain briefly the Arbitrage Pricing Model and state its assumptions. [6mks]

QUESTION FOUR

- a. State five characteristics of securities. [5 mks]
- b. Security X returns depends on three factors; inflation, industrial production and aggregate degree of risk aversion. Given that $R_f = 8\%$. Required Rate of Return (RRR) on a portfolio with unit sensitivity of inflation at zero, sensitivity to other factors is 13.0%; RRR on a portfolio with unit sensitivity to industrial production at zero sensitivity to inflation and other factors is 10%. RRR on a portfolio with unit sensitivity to the degree of risk aversion at zero sensitivity to other factors is 6%. Security X has β_s of 0.9 with the inflation, 1.2 with industrial production and -0.7 with risk bearing portfolio (risk aversion). Assume that the Required Rate of Return on the market is 15% and stock X has CAPM $\beta = 1.1$

Required:

Compute security Xs Required Rate of Return using

- a. CAPM [2marks]
- b. APT [3marks]
- c. The share of EABL is selling for Ksh. 104, Odhiambo buys a 3 month call option at a premium of Ksh. 5 the exercise price is Ksh. 105.
- i. What is Odhiambo's pay off if the share price is Ksh.100, Ksh.110, Ksh.115, Ksh.120 or Ksh.125 at the time the option is exercised? [5mks]
- ii. What is the pay off of the seller of the call option? [5mks]

QUESTION FIVE

- a. Explain four implications of efficient market hypothesis for investment decision makers. [8mks]
- b. Based on five years of monthly data, you derive the following information for the companies listed.

Company	α (intercept)	σ_j	Υ_{jm}
Stanchart	0.22	12.10%	0.72
Kakuzi	0.10	14.6%	0.33
Bamburi Cement	0.17	7.6%	0.55
CMC Motors	0.05	19.2%	0.60
NSE20 Share Index	0.00	5.5%	1.0

Required:

- i. Compute the beta coefficient for each stock. [5mks]
- ii. Assuming a risk – free rate of 8% and an expected return for the market portfolio of 15%, compute the expected return for all stocks and plot them on the security market line. [7mks]