



TECHNICAL UNIVERSITY OF MOMBASA
SCHOOL OF BUSINESS
DEPARTMENT OF ACCOUNTING & FINANCE
UNIVERSITY EXAMINATION FOR:
BCOM

BFI 4402: PORTFOLIO AND INVESTMENT ANALYSIS

END OF SEMESTER EXAMINATION
SERIES: AUGUST 2019
TIME: 2HOURS
DATE: 16Aug2019

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

QUESTION One

- a) Explain the mechanics of calculating the present value of cash flows. **(5Marks)**
- b) Define a yield curve. What are the reasons for an upward sloping yield curve? What is an Inverted yield curve? **(5Marks)**
- c) Does diversification reduce the risk of investment? Explain with an example. **(5Marks)**
- d) i) Explain the security market line (SML) with the help of a figure. **(3Marks)**
ii) How does it differ from the capital market line? **(2 Marks)**
- e) Star Computer Systems Limited has forecasted returns on its share with the following probability distribution:

Return (%)	Probability
-20	0.05
-10	0.05
-5	0.10
10	0.15
18	0.20
20	0.25
30	0.05

Calculate the expected return, variance and standard deviation of returns for star. **(10Marks)**

QUESTION Two

- a) Discuss the assumptions of the Black-Scholes model (10Marks)
- b) John Sharma is interested in writing a six –months call option on L & T shares. L& T's is currently selling for Ksh. 120. The volatility (standard deviation) of the share returns is estimated as 67 per cent. Rakesh would like the exercise price to be Shs. 120. The risk-free rate is assumed to be 10percent. How much premium should Rakesh charge for writing the call option? (10Marks)

QUESTION Three

- a) Using the diagram illustrate the Efficiency Market Hypothesis . (10Marks)
- b) Explain why the Nairobi Security Exchange bourse has failed to attract many companies for listing?
(10Marks)

QUESTION Four

- a) Discuss the phases involved in constructing a portfolio. (10Marks)
- b) The stock market and Treasury bills returns are expected to be as follows:

Economic Conditions	Probability	Market Return (%)	Treasury Bills (%)
Growth	0.20	28.5	9.5
Decline	0.30	-5.0	9.5
Stagnation	0.50	17.9	9.2

Required

Calculate:

- i) The expected market and treasury bills. (5Marks)
- ii) The expected risk premium. (5Marks)

QUESTION Five

- a) Discuss briefly about Sharpe's measure mentioning its advantages and disadvantages as a tool to measure portfolio performance. (10Marks)

- b) During the last 10 years period the average annual rate of return on NSE (market portfolio) was 14% and the average annual rate of return on a risk free asset (TB) was 8%. As an administrator of a large pension fund that is divided among three money managers you must decide whether to renew your investment with each of these money managers. You have gathered the following information:

Investment manager	Average annual rate of return	Beta of portfolio	Std. deviation of 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 (α_m) = 2%

Required

Evaluate the performance of the managers using Treynor's performance measure, Shape's performance measure and Jensen's portfolio measure and rank them. **(10Marks)**