# MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

## MAIN, WEBUYE, BUNGOMA AND NAIROBI CAMPUS

### UNIVERSITY EXAMINATIONS
### 2016/2017 ACADEMIC YEAR

### FOURTH YEAR SEMESTER ONE EXAMINATIONS

### FOR THE DEGREE
### OF
### BACHELOR OF BUSINESS MANAGEMENT

**COURSE CODE:** BCF 412

**COURSE TITLE:** ASSET MANAGEMENT

**DATE:** Thursday 15th December, 2016          **TIME:** 9:00AM-11:00AM

## INSTRUCTIONS TO CANDIDATES

Answer **QUESTION ONE** and **ANY OTHER TWO** questions

TIME:   2 Hours

MMUST observes ZERO tolerance to examination cheating.

## QUESTION ONE

a) The financial manager of Rope Company has observed that the average return on common stock was 10 percent, 5 percent on Treasury bill, and 11 percent on the firm's pension fund. The market return has an annual standard deviation of 20 percent and the fund return has a beta of 0.6 and annual standard deviation of 16 percent.

    i)       What is the risk premium on the pension fund?        **(2 Marks)**

    ii)      What is the total gain from picking stocks?        **(2 Marks)**

    (iii)After allowing for the unique risk, what is the net gain from picking stocks?

                          **(2Marks)**

b) i) Briefly discuss the role of sovereign wealth funds (SWF) as an asset class    **(6Marks)**

c) Explain two major roles expected of a portfolio manager detailing how he/she gets to achieve this function for the investor.    **(5Marks)**

d) i) Distinguish among the following portfolio performance measures and describe how each of them is calculated.

        • The Sharpe ratio            **(2Marks)**

        • TheTreynor ratio            **(2Marks)**

        • Jensen's alpha            **(2Marks)**

    ii)    State whether each measure assumes that the relevant risk is systematic, unsystematic,or total. Explain how each measure relates excess return and the relevant risk. **(3 Marks)**

e) What role doesSecurity market line (SML) and Capital market line (CML) play in portfolio management    **(4Marks)**

## QUESTION TWO

a) Explain the steps involved in buying a mutual fund.    **(10Marks)**

b) Bills marginal tax rate is 35 percent, and he lives in a state that does not have a state income tax, so his short-term distributions will be taxed at 35 percent.

The following information is for two of Bill's bond mutual funds:

| Mutual Funds | Fund A | Fund B |
| --- | --- | --- |
| Beginning NAV | shs.100.00 | shs.10.00 |
| Short-Term Distributions | shs.1.00 | shs.0.90 |
| Ending NAV | shs.109.00 | shs.10.10 |
| Estimated turnover | 10% | 90% |

Calculate:

i)    Calculate Bill's before-tax and after-tax returns on Fund A and Fund B.    **(4Marks)**

ii)     Discuss three explicit costs associated with investing in mutual funds.     (6Marks)

**QUESTION THREE**

a) During the annual review of Acme's pension plan, several trustees questioned Lucy Graham a pension consultant, about various aspects of performance measurement and riskassessment. In particular, one trustee asked about the appropriateness of using each ofthe followingbenchmarks:

- Market index                                    (2Marks)
- Benchmark normal portfolio                       (2Marks)
- Median of the manager universe                   (2Marks)

b) Explain two different weaknesses of using each of the three benchmarks to measure the Performance of a portfolio.     (2Marks)

c) The following portfolios are being considered for investment. During the period under consideration, RFR = 0.07.

| Portfolio | Return | Beta | $\sigma_i$ |
|-----------|--------|------|-----|
| P | 0.15 | 1.0 | 0.05 |
| Q | 0.20 | 1.5 | 0.10 |
| R | 0.10 | 0.6 | 0.03 |
| S | 0.17 | 1.1 | 0.06 |
| Market | 0.13 | 1.0 | 0.04 |

i) Compute the Sharpe measure for each portfolio and the market portfolio.     (4Marks)
ii) Compute the Treynor measure for each portfolio and the market portfolio.     (4Marks)
iii) Rank the portfolios using each measure, explaining the cause for any differences you find in the rankings.     (4Marks)

**QUESTION FOUR**

a) Explain five ways that REITs can use to achieve growth and expansion?     (10Marks)

b) The principle amount for a mortgage is shs.200000 to be repaid over a period of 20 years at an annual rate of 10%.

Required:

i)     Compute monthly mortgage payment for this loan.     (2Marks)
ii)     Amortize the mortgage loan for the first one year.     (6Marks)
iii)     Suppose the mortgage is paid off after one year, how much will be paid to clear the mortgage.     (2Marks)