



**MASINDE MULIRO UNIVERSITY OF SCIENCE AND  
TECHNOLOGY**

**(MMUST)**

**MAIN/BUNGOMA/WEBUYE/KAPSABET/MUMIAS/NAIROBI CAMPUS**

**UNIVERSITY EXAMINATIONS**

**2018/2019 ACADEMIC YEAR**

**FORTH YEAR FIRST SEMESTER EXAMINATIONS**

**FOR THE DEGREE**

**OF**

**BACHELOR OF COMMERCE**

**COURSE CODE: BCA 412**

**COURSE TITLE: ASSET MANAGEMENT**

**DATE: Friday 1<sup>st</sup> February 2019      TIME: 12-2pm**

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**INSTRUCTIONS TO CANDIDATES**

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

**TIME: 2 HOURS**

**MMUST observes ZERO tolerance to examination cheating**

This Paper Consists of 4 Printed Pages. Please Turn Over.

### **QUESTION ONE 30 MARKS (COMPULSORY)**

- 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) Consider the following performance data for two portfolio managers (A and B) and a common benchmark portfolio:

	BENCHMARK		MANAGER A		MANAGER B	
	Weight	Return%	Weight	Return%	Weight	Return%
Stock	0.6	-5.0	0.5	-4.0	0.3	-5.0
Bonds	0.3	-3.5	0.2	-2.5	0.4	-3.5
Cash	0.1	0.3	0.3	0.3	0.3	0.3

- Calculate (i) The overall return to the benchmark portfolio **(2marks)**

- (ii) The overall return to manager A's actual portfolio, and **(2marks)**

- (iii) the overall return to Manager B's actual portfolio. **(2marks)**

- (iv) Briefly comment on whether these managers have under- or outperformed the benchmark fund. **(2marks)**

- c) i) How are Real Estate Investment Trusts a unique asset class in asset management **(3 marks)**  
ii) Explain the limitations on the types of assets REITS may own and manage **(4marks)**  
d) Explain the growing popularity of sovereign wealth funds around the world today. **(6marks)**  
e) Why is the J-curve used to describe performance of private equity funds? **(3marks)**

## QUESTION TWO(20 MARKS)

The balance sheet below represents the pension plan of Myers inc.

Assets	(Shs. Millions)	Liabilities	(Shs. Million)
Pension fund	720	Vested accrued benefits	540
Future normal cost	600	unvested accrued benefits	220
Unamortized experience losses	90	Expected future service costs	<u>900</u>
Unamortized supplemental liabilities	100		
Losses from changes in actuarial assumptions	<u>150</u>		
Total assets	<u>1660</u>	Expected benefits	<u>1660</u>

- a) Explain the meaning of each of the terms in the table above. (8 marks)
- b) Calculate
- i) Unfunded vested accrued benefits (2marks)
  - ii) Unfunded accrued benefits (2 marks)
- c) Suppose normal costs do not change, show how the balance sheet would change if;
- i) The value of securities in the pension fund falls by shs. 50 million. (4 marks)
  - ii) The union negotiation increased pension worth shs. 80 million (4marks)

## QUESTION THREE(20 MARKS)

a) 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.(3marks)
  - ii) Compute the Treynor measure for each portfolio and the market portfolio.  
3marks
  - iii) Rank the portfolios using each measure, explaining the cause for any differences you find in the rankings. (4 marks)
- b) A mortgagee is to obtain a facility amounting to shs.200000 to be repaid over a period of 20 years at an annual rate of 10%. Help him to;
- 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)



**QUESTION FOUR (20 MARKS)**

- a) Distinguish between Mutual funds, Hedge funds, sovereign funds and private equity funds in terms of risk and expected return. (10marks)
- b) The Dow Theory is a common tool used by asset managers for technical analysis of share price movements in the stock market. Draw trends in the bull and bear market and suggest timings for buying and selling of shares. (10 Marks).

**QUESTION FIVE (20 MARKS)**

- (a) Identify and briefly explain two advantages of a defined contribution pension plan. (4 Marks).

- (b) A Pension Fund starts the year with KShs.50 million. After six months it has appreciated to Kshs 60 Million at which point it pays out pension of Kshs 20 million. In the second half of the year, the fund appreciates by a further 50 percent.

**Required.**

- (i) Calculate the annually compounded Kshs time-weighted rate of return. (6 Marks).
- (ii) Calculate the annually Kshs weighted rate of return. (6 Marks).
- (iii) Suppose that this fund had a midyear cash inflow of Shs 20 million rather than an outflow. Would this reduce or increase the time weighted rate of return. (4 Marks).