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(University of Choice)

# MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

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

**UNIVERSITY EXAMINATIONS**
**2022/2023 ACADEMIC YEAR**

**MAIN EXAM**

**FOURTH YEAR SEMESTER ONE EXAMINATIONS**

**FOR THE DEGREE**
**OF**
**BACHELOR OF COMMERCE**

**COURSE CODE: BCF 407**

**COURSE TITLE: SECURITY ANALYSIS AND SECURITIZATION**

**DATE: MONDAY 19TH DECEMBER 2022** **TIME:** 12-2PM

**INSTRUCTIONS TO CANDIDATES**

Answer **QUESTION ONE** and **ANY OTHER TWO (2)** 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. If EMH is correct, it is a waste of time for most of us to analyze stocks by looking for those that are undervalued. If stock prices already reflect all publicly available information, and hence are fairly priced, one can "beat the market" only by luck, and it is difficult, if not impossible, for anyone to consistently outperform the market averages. Discuss. (10 Marks)

B. On January 1, 2016, the J&S 200 index was trading at 1320. The dividend yield on the index was only 1.43%, but including stock buybacks increases the modified dividend yield to 2.50%. Analysts estimated that the earnings of the stocks in the index would increase 7.5% a year for the next 5 years. Beyond year 5, the expected growth rate is expected to be 5%, the nominal growth rate in the economy. The Treasury bond rate was 5.1% and the market risk premium was 4% leading to a cost of equity of 9.1%.

Required:

a) Determine the expected dividends (and stock buybacks) on the index for the next 5 years using the expected growth rate of 7.50%. (4 Marks)

b) Determine the present value of the index and commend on whether it is overvalued or undervalued. (8 Marks)

C. Explain with relevant examples if necessary, the concept of term structures of interest rates. Briefly explain the main theories of term structure of interest rates. (8 Marks)

**QUESTION TWO: 20 MARKS**

A. What do you understand by the term margin trading? Distinguish between an over margined/ unrestricted account, under margined account and a restricted account. (6 Marks)

B. Kajairos purchases on margin 2000 shares of Jiinue stock for Ksh.65 per share with an initial margin requirement of 50%. The interest rate on margin purchases is 15%. Since the market for securities depends on available information he believes that it can either increase in value by Ksh.20 or depreciate in value by Ksh.15.

**Required:**

i. Calculate the rate return for both a cash purchaser and a margin purchaser in both scenarios. What do they imply? (6 marks)

ii. How much can the share price drop before Tommy receives a margin call? (8 Marks)

## QUESTION THREE: 20 MARKS

A. What do you understand by the term price multiple? What are the main common price multiples used in security analysis? (7 Marks)

B. The following information relates to several call and put options;

| Type of Option | Exercise Price | Premium | Current Price of underlying stock |
|---|---|---|---|
| Call | 18 | 0.25 | 19.50 |
| Put | 30 | 0.50 | 31.20 |
| Call | 24 | 0.25 | 21.40 |
| Call | 45 | 0.30 | 46.10 |
| Put | 60 | 1.25 | 56.25 |
| Call | 20 | 0.25 | 20.00 |
| Put | 35 | 1.00 | 37.80 |
| Put | 20 | 0.80 | 17.60 |
| Call | 65 | 0.50 | 65.50 |

Required:

i. Identify which of these options are in the money, at the money and out of the money. (5 Marks)

ii. Using the information in the table above calculate the Profit/ Loss for each option contract if they would be exercised. (8 Marks

## QUESTION FOUR:20 MARKS

A. Common stock does not have 'term to maturity. How then can a stock that does not pay dividends have any value? Give an examples of such firms listed in the domestic market of your country. (8 Marks)

B. What do you understand by the term market capitalization? Differentiate between free float method and broad capitalization method (6 Marks)

C. The annual spot yield curve for a bond is as follows: One-year 3.5% Two-year 4.0% Three-year 4.7% Four-year 5.5%. (6 Marks)

ABC company wants to issue this bond redeemable in four years for its par value or face value of \$100, and wants to pay an annual coupon of 5% on the par value. Estimate the price at which this bond should be issued.