MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR
THIRD YEAR SECOND SEMESTER

SCHOOL OF BUSINESS AND ECONOMICS
BACHELOR IN SCIENCE IN FINANCIAL ECONOMICS

COURSE CODE: ECF 3203
COURSE TITLE: CORPORATE FINANCE 11

DATE: 25TH APRIL 2019 **TIME: 0830 – 1030HRS**

INSTRUCTIONS TO CANDIDATES

1. Answer Question **ONE** and any other **THREE** questions
2. Question one is **compulsory** and it carries 25 marks **other** questions are 15 marks each

*This paper consists of **FIVE** printed pages. Please turn over*

Question one

a) Is it true under agency theory that a corporate manager will always undertake projects with positive net present value, under conditions of no capital rationing? Explain. (5 marks)

b) Suppose an investor utility of wealth function is expressed as follows. U = $2x - 0.05x^2$ where U is the number of utiles and X is the increment of wealth in units of Ksh 1000. Two investments are being considered. Investment A has a 50% probability of a Ksh 10,000 increment and a 50% probability of a Ksh 20,000 increment. While B has a 50% probability of providing a zero increment in wealth and a 50% probability of a a Ksh 30,000 increment.

i) Compute the utile values associated with each investment **(5 marks)**

ii) Which investment provides greater utility **(1 mark)**

iii) Compute the expected value of wealth increment X **(4 marks)**

iv) Which investment provides greater expected value of increment? **(1 mark)**

c) The Capital Asset Pricing Model (CAPM) has been identified as a method for estimating the cost of Equity Capital.

i) Identify and describe how this model might be applied in actual practice by a company. What is the major weakness in using CAPM as a method of valuing a firm? **(5 marks)**

ii) Why would you consider the Arbitrage Pricing Theory to be much more robust than the Capital Asset Pricing Model? **(4 marks)**

QUESTION TWO

a) Wams Company purchased a machine 5 years ago at a cost of Ksh.7.5M. The machine had an expected life of 15 years at the time of purchase and Ksh.0 estimated salvage value at the end of these years. The firm uses straight line depreciation method and the book value of the machine at present is Ksh.5M. The Finance Manager reports that Ksh.12M i.e. including installation costs, a new machine can be bought which over its 10-year life will expand sales from Ksh.10M to Ksh.11M a year. Further, it will reduce labour costs and raw material wastages sufficiently to cut rating costs from Ksh.7M to Ksh.5M. The new machine has an estimated salvage value of Ksh.2M at the end of 10 years. Old machine's current market value is Ksh.1M. The tax rate is 40% and the cost of capital is 10%.

Required:

Using the NPV method, determine whether the old machine should be replaced. **(8 Marks)**

b) Xyz Ltd earned Ksh. 4.4M in 2018 out of which 50% has been allocated for distribution to common shareholders. There are currently 1.1M shares outstanding and market price per share is Ksh.20. Instead of the company paying dividend the company can repurchase some of its share @ 22 per share

Required:

i) What would be dividend per share if the company paid out dividend? **(2 marks)**

ii) How many shares would the company repurchase? **(2 marks)**

iii) What is the effect of repurchase on the earnings per share and MPS (assume that total earnings remain constant and P/E ratio remains constant). **(3 marks)**

QUESTION THREE

The risk free rate is 10% and the expected return on the market portfolio is 15%. The expected returns for 4 securities are listed below together with their expected betas

SECURITY	EXPECTED RETURN	EXPECTED BETA
A	17.0%	1.3
B	14.5%	0.8
C	15.5%	1.1
D	18.0%	1.7

REQUIRED:

a) On the basis of these expectations, which securities are overvalued? Which are undervalued? **(5 marks)**

b) If the risk-free rate were to rise to 12% and the expected return on the market portfolio rose to 16%, which securities would be overvalued? Which would be under-valued? (Assume the expected returns and the betas remain the same). **(5 marks)**

c) Discuss five external hedging techniques in international investment and business **(5 marks)**

QUESTION FOUR

Companies U and L are identical in every respect except that U is unlevered while L has Sh 10 million of 5% bonds outstanding. Assume

(a) That all of the MM assumptions are met

(b) That there are no corporate or personal taxes

(c) That EBIT is Sh 2 million

(d) That the cost of equity to company U is 10%

Required:

i) Determine the value MM would estimate for each firm **(4 marks)**

ii) Determine the cost of equity for both firms **(4 marks)**

iii) What is the overall cost of capital for both firms? **(3 marks)**

Suppose the value of U is Sh 20 million and that of L is Sh 22 million. Explain the arbitrage process for a shareholder who owns 10% of company L's shares. **(4 marks)**

Question five

The shares of ABC Ltd are currently selling at Ksh.290 each at the stock exchange. The exercise price for a six month call option is Ksh. 260. The prevailing risk free rate is 12% p.a. The variance of ABC ltd share price has been 15%

Required

i) Using Black and Scholes valuation option model determine the value of such an option **(10 marks)**

ii) Explain five factors that affect the put options. **(5 marks)**

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