



MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS

2018/2019 ACADEMIC YEAR

THIRD YEAR FIRST SEMESTER

SCHOOL OF BUSINESS AND ECONOMICS

**BACHELOR OF SCIENCE IN FINANCIAL
ECONOMICS**

COURSE CODE: ECO 3111

COURSE TITLE: THEORY OF FINANCE

DATE: 7TH DECEMBER 2018

TIME: 11.00AM - 1.00PM

INSTRUCTIONS TO CANDIDATES

Answer Question **ONE** and any other **THREE** questions

This paper consists of 4 printed pages. Please turn over.

QUESTION ONE

- (a). Use examples and illustrations explain eight principals of finance. **(8mks)**
- (b). Make-Em happy Corp. (MEH) has a different security for sale. You pay MEH Kshs 1000 today and the company will give you back Kshs 100 at the end of the first year, sh 200 at the end of year 2..... Kshs 1000 at the end of year 10.
- (i). Calculate the internal rate of returns of this investment. **(5mks)**
- (ii). Show an amortization table for the investment. **(5mks)**
- (c). Explain the following concepts as used in theory of finance. **(7mks)**
- (i). Net present value
 - (ii). Effective annual interest rate
 - (iii). Capital market line (CML)
 - (iv). Stock market line. (SML)
 - (v). Risk-adjusted discount rate. (RADR)
 - (vi). Weighted average cost of capital. (WACC)
 - (vii). Marginal rate of time preference.

QUESTION TWO

- (a). Explain how a financial intermediary reduces the cost of contracting and information processing. **(3mks)**
- (b). Your firm is considering two projects with the following cash flows.

Year	project A	project B
0	_____ -500	_____ -500
1	_____ 167	_____ 200
2	_____ 180	_____ 250
3	_____ 160	_____ 170
4	_____ 100	_____ 25
5	_____ 100	_____ 30

- (i). If the appropriate discount rate is 12% rank the two projects. **(3mks)**
- (ii). Which project is preferred if you rank by IRR? **(2mks)**

- (iii). Calculate the crossover rate and discount rate in which the NPVs of both projects are equal. **(3mks)**
- (iv). Should you use NPV or IRP to choose between the two projects? Give brief discussion. **(4mks)**

QUESTION THREE

- (a). The XYZ company limited has the following information.

Market value of debt Kshs 2,500,000
 Market value of equity Kshs 1,000,000
 Cost of debt, r_D 5%
 Tax rate, T_c 25%
 WACC 10%
 Calculate the cost of equity r_E .

(5mks)

- (b). A boudy corp's stock price is currently Kshs 22 per share. The company has paid a dividend of ksh. 0.55 per share and shareholders anticipate that this dividends will grow in the future at rate of 6% per year. Use the Gordon model to calculate the company's cost of equity r_E . **(4mks)**
- (c). Explain the risk associated with the mortgage origination process. **(3mks)**
- (d). Explain the key features of an option market. **(3mks)**

QUESTION FOUR

- (a). Explain the difference between a spot exchange rate and a forward exchange rate. **(3mks)**
- (b). The following are the spot exchange rates reported on July 24,2018:

Japanese yen	British pound	Canadian dollar
US \$ 0.008864	1.477	0.6596

The exchange rate indicate the number of US dollar necessary to purchase one unit of the foreign currency

- (i). From the perspective of a US investor, explain whether the preceding foreign exchange rates are direct or indirect. **(3mks)**

(ii). How much of each of the foreign currencies is needed to buy one US dollar?

(3mks)

(iii). Calculate the theoretical cross rates.

(3mks)

(c). The assumptions underlying the Miller-Modigliani (MM) dividend irrelevance hypothesis are unrealistic. Discuss with illustrations and examples. **(3mks).**

QUESTION FIVE

(a). Explain the difference between the primary and the secondary markets **(4mks)**

(b). Use the Black-Scholes model to price the following:

(i). A call option on a stock whose current price is $s=50$, with exercise price $x=50$, $T=0.5$, $r=10\%$, and $\delta=25\%$. **(4mks)**

(ii). A put option with same parameters. **(2mks)**

(c). Explain the main source of capital and their limitations. **(5mks)**

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