MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF ECONOMICS AND FINANCE

EAE 403: FINANCIAL ECONOMICS

DATE: 19/8/2021 **TIME: 2.00-4.00 PM**

INSTRUCTIONS:

(i) **Answer question one (Compulsory) and any other two questions**

(ii) **Do not write on the question paper**

(iii) **Show your working clearly**

QUESTION ONE (COMPULSORY) (30 MARKS)

a) Kenya power & lighting cooperation is comparing two different capital structures, an all equity plan (Plan I) and a levered plan (Plan II). Under Plan I, KPLC would have 240,000 shares of stock outstanding. Under Plan II, there would be 160,000 shares of stock outstanding and $3.1 million in debt outstanding. The interest rate on the debt is 10 percent and there are no taxes. Required;

i) If EBIT is ksh.750, 000, which plan will result in the higher EPS? (3 marks)

ii) If EBIT is ksh.1,500,000, which plan will result in the higher EPS? (3 marks)

iii) What is the break-even EBIT? (1 mark)

b) There are various approaches to capital budgeting of leveraged firms. Explain three of them clearly. (9 marks)

c) 'The value of a firm can be manifested through a number of business interests'. Discuss. (9 marks)

d) Explain the meaning of the following terminologies as used in financial economics:

i. Agency relationship

ii. Agency problem

iii. Agency cost

iv. Proxy fight

v. stakeholders

QUESTION TWO (20 MARKS)

a) Enumerate the steps followed in applying the excess earnings approach to value a business (10 marks)

b) List five and explain assumptions that lie behind the Modigliani–Miller theory in a world without taxes. (10 marks)

QUESTION THREE (20 MARKS)

a) A stock has an expected return of 16.2 percent, a beta of 1.75, and the expected return on the market is 11 percent. Find the risk-free rate? (4 marks)

b) When calculating the value of a growing perpetuity there are three key important factors that must be considered. Explain them. (6 marks)

c) Suppose you are the financial manager of Kenya Power & Lighting Electricity Company. Describe the goals that you think would be appropriate to ensure efficiency in the company's operations? (10 marks)

QUESTION FOUR (20 MARKS)

a) The return on any stock in a financial market consists of two major sections. Clearly explain them. (6 marks)

b) Explain two capitalization assumptions when valuing the business of a firm. (6 marks)

c) Linda invested $1,000 at a continuously compounded rate of 10 percent for two years. What will be the value of her wealth at the end of 2 years? (3 marks)

d) Why would the management want to increase the Earning Per Share for a company? (2 marks)

e) Explain the following terminologies as used in financial economics;

i) Moral hazard

ii) Corporate finance

iii) Arms' length transaction (3 marks)

QUESTION FIVE (20 MARKS)

a) Bruce & Co. expects its EBIT to be $140,000 every year forever. The firm can borrow at 9 percent. Bruce currently has no debt, and its cost of equity is 17 percent. If the tax rate is 35 percent, what is the value of the firm? (6 marks)

b) A customer of the Chaffkin Corp. wants to buy a tugboat today. Rather than paying immediately, he will pay $50,000 in three years. It will cost the Chaffkin Corp. $38,610 to build the tugboat immediately. What interest rate would the Chaffkin Corp. charge to neither gain nor lose on the sale? (4 marks)

c) Demonstrate the difference between CAPM and APT. (4 marks)

d) An investment offers USD 4,300 per year for 15 years, with the first payment occurring one year from now. If the required return is 9 percent:

i. What is the value of this investment? (3 marks)

ii. What would the value be if the payments occurred for 40 years? (3 marks)