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**UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR
FIRST YEAR SECOND SEMESTER
MAIN EXAMINATION**

FOR THE MASTERS DEGREE IN

COURSE CODE: MBA 831

COURSE TITLE: FINANCIAL ECONOMICS

DATE: 14TH AUGUST, 2023

TIME: 2.00PM – 5.00PM

INSTRUCTIONS TO CANDIDATES

Answer Question One in Section A and Any other TWO (3) Questions in Section B

TIME: 3 HOURS

SECTION A

QUESTION ONE.

- a. Discuss three approaches to capital budgeting of projects for levered firms (10 marks)
- b. Explain the Gordon growth theory and show how it can be used in valuation of a business (6 marks)
- c. Raven Roost Corporation currently has no debt in its capital structure. The firm is considering issuing debt to buy back some of its equity. The firm's assets are Ksh.10 million with 1 million shares of all-equity firm. The proposed debt issue is for Ksh.5 million. The interest payment is 10 percent. Assume that there are three economic conditions, recession, expected and expansion with gross earnings as 0.6 million, Ksh.1.3 million and Ksh.2 million for the respective conditions. Show the variability in Earnings per Share (EPS) and Return on Equity (ROE) in the two capital structures. (10 marks)
- d. You are given the following information about a company

Net tangible asset value 240,000

Average annual economic income 80,000

Required return to support tangible assets 12%

Capitalization rate for excess earnings 25%

Given this information, use the excess earnings method to calculate the value of the firm (10 marks)

- e. Explain four underlying assumptions for MM proposition 1 (4 marks)

SECTION B

QUESTION TWO

- a. JohnPombe Ltd currently has no debt in its capital structure. The firm is considering issuing debt to buy back some of its equity. The firm's assets are Ksh.1 million with 100,000 shares of all-equity firm. The proposed debt issue is for Ksh.500, 000. The interest payment is 10 percent. Assume that

the gross earnings are Ksh.200, 000. Show the variability in Earnings per Share (EPS) in the two capital structures. (10 marks)

- b. Ekalakala Agencies wishes to invest in two projects A and B. The projects are expected to grow terminally at 6 percent. The cost of capital is 16 percent and 12 percent for projects A and B respectively. The total cost of each project is estimated to be KES 800,000 million. You have been given the following additional information;

| Net cash flows | Year 1 | Year 2 | Year 3 |
|----------------|---------|---------|---------|
| Project A | 300,000 | 320,000 | 240,000 |
| Project B | 340,000 | 400,000 | 250,000 |

If Ekalakala assumes that the projects are to continue in perpetuity, which project will post the highest returns (10 marks)

QUESTION THREE

- a. Kabura wants to invest in a savings account for purposes of educating his children in the university 15 years from today. If Kabura wishes to save 4 million at the by the end of the 15th year and that the return from the savings is 12% p.a compounded monthly, How much should she deposit in his account every end month in order to realize this desired amount? (3 marks)
- ii. Suppose the payment is in the beginning of the month, How much should she deposit the in order to realize this amount? (2 marks)
- iii. Determine the monthly loan payments necessary to repay a Kshs 15 million loan if the interest is computed at 14% per year compounded monthly if the period of the loan is 10 years. What will be the amount interest paid over the three years? (5 marks)
- b. Agency theory suggests that a way to motivate managers to act in the best interests of the owners/shareholders is to link managerial compensation to performance measures such as net income or share prices. However such linkage imposes risk on the manager.

Required:

- i) Why is it important to control or reduce some of the risk thus imposed on managers?
(3 marks)
- ii) How can the compensation risk imposed on corporate managers be controlled or reduced?
(4 marks)
- iii) Inclusion of shares and options in managerial compensation packages has been attributed to the desire of the owners/shareholders to provide managers an incentive to undertake policies that benefit the firm in the long-term. If this is true, what is the justification for having cash or bonus element in the compensation package? (3 marks)

QUESTION FOUR

- a. i. Two companies Clintone Ltd and Drump Ltd are identical in every respect except that Clintone Ltd is unlevered while Drump is levered with a debt of Kshs 5,000,000 carrying 6% interest. Both firms have an annual operating income of Kshs 1,000,000. Both firms have a Return on Equity (ROE) of 10%. Assuming absence of taxes, show that the value of both firms will be equal when certain market conditions exist (5 marks)
- ii. Suppose we now assume that a corporate tax of 30% exists for Drump Ltd, how does your result in part (a) change if we assume that the operating income is infinite. (5 marks)
- b. Kibabii University has established two hotels under different company names at the Coast namely North Coast Beach Hotel Limited and South Coast Beach Hotel Limited. The North Coast Beach Hotel Limited is an unlevered company while for South Coast Beach Hotel Limited a debt of Ksh.2 million carrying an interest rate of 9.5 percent per annum is issued. Both hotels are generating an operating income of Ksh.200,000 per month. The stockholders of both hotels have a Return on equity (RoE) of 10 percent.

- i) State and prove the Modigliani and Miller Hypothesis proposition 1 for the two companies (7 Marks)
- ii) Discuss three important assumptions that are necessary for the above proposition to hold true (3 Marks)

QUESTION FIVE

a. The following data has been established for Jubinasali Ltd, a firm that engaged in real estate in Kenya.

| A | B | C | D | E | F | G | H | I | |
|-------|------|-------|-------|----------|----------|----------------|-------------|----------------|------------|
| State | prob | R_m | R_j | $E(R_m)$ | $E(R_j)$ | $R_m - E(R_m)$ | $(H)^2 P_i$ | $R_j - E(R_j)$ | $(G*J)P_i$ |
| 1 | 0.1 | -0.5 | -0.4 | -0.05 | -0.04 | -0.71 | 0.05041 | 0.04828 | |
| 2 | 0.3 | 0.2 | 0.2 | 0.6 | 0.6 | -0.01 | 3E-05 | 0.00024 | |
| 3 | 0.4 | 0.3 | 0.4 | 0.12 | 0.16 | 0.09 | 0.00324 | 0.00432 | |
| 4 | 0.2 | 0.4 | 0.5 | 0.08 | 0.1 | 0.19 | 0.00722 | 0.00836 | |
| | | | | 0.21 | 0.28 | | 0.0609 | 0.0612 | |
| | | | | | | | | | |
| | | | | | | | | | |

The risk-free rate is 6%.

Find:

- i. The expected market return $E(R_m)$ (3marks)
- ii. The variance of the market return (3 marks)
- iii. The expected return for Jubinasali $E(R_j)$ (3 marks)
- iv. Find the covariance $Cov(R_j, R_m)$ (3 marks)
- v. Find the Beta for security of Jubinasali (B_j) (3 marks)
- vi. Using the above information state the CAPM (3 marks)
- vii. What is the required return for the company? How does it compare with its expected return? (2 marks)