



MACHAKOS UNIVERSITY
UNIVERSITY EXAMINATIONS 2019/2020
SUPPLEMENTARY EXAMINATIONS
EAE 403: FINANCIAL ECONOMICS

DATE _____

TIME _____

INSTRUCTIONS

Answer Question ONE and any other TWO Questions

Time 2 Hours

Question One

- a) Suppose a new firm Makongeni Ltd is formed .The management of the firm is expecting an EBIT of 48% on investment worth Kshs 1,000,000.

The firm has two plans:

- 1) Raise the entire fund by issuing 100,000 shares at Kshs 10 per share
- 2) Raise equity of 50,000 shares at Kshs 10 and borrow Kshs 500,000 at 15% interest

Required:

- i) Which of the above plans will maximize shareholder`s earnings? Why?
(Assume a corporate tax rate of 50%) **(6 marks)**
 - ii) What is the interest shield associated with the levered firm **(2 marks)**
- b) Security X and Y have the following characteristics under different states of the economy

State of economy	Probability	Returns for X (%)	Returns for Y (%)
A	0.05	30	-20
B	0.25	20	10
C	0.30	10	20
D	0.30	5	30

E	0.10	-10	40
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Required:

- Compute the expected returns, variance and standard deviation for each of the individual securities **(8 marks)**
- If the investment have equal weights , calculate the expected return for the portfolio **(3 marks)**
- If the covariance for Security X and Y is given as = - 123.5
Calculate the variance and standard deviation of the portfolio **(4 marks)**
- Comment on the difference between the standard deviation of the individual securities and the portfolio **(3 marks)**
- Briefly explain four special problems that are solved by financial intermediaries through indirect finance **(4 marks)**

Question Two

- Kipepeo Ltd wishes to replace one of its projects that is doing poorly from a pool of three proposed projects A, B, C. The three projects are expected to cost Kshs 200, 000 each. The required rate of return is 10% .The anticipated cash flows after tax are as follows

Year	A	B	C
1	40000	70500	100000
2	60000	80500	105000
3	50000	82500	5000
4	65000	28500	-
5	175000	-	-

Required:

- Rank each project using the Net Present Value method and select the best alternative **(7 marks)**
 - Suppose each of the projects is expected to continue perpetuity with a constant growth rate of 5%, how will the returns in part (a) above change? **(7 marks)**
- Explain three methods of capital budgeting for levered firms **(6 marks)**

Question Three

- Two companies Ruri Ltd and Wire Ltd are identical in every respect except that Ruri Ltd is unlevered while Wire Ltd is levered. Both firms have an annual operating income of Kshs 600,000 and the Return on Equity (ROE) is 10%.Assume further that the levered firm has a debt of Kshs 2,000,000 carrying an 8% interest rate

Required:

- i) State the MM proposition 1 and prove it using the above information (10 marks)
 - ii) What are the assumptions associated with the MM proposition 1 above (5 marks)
- b) Highlight five functions of corporate finance (5 marks)

Question Four

- a) Differentiate between systematic and unsystematic risk and describe its significance in evaluating risk (4 marks)
- b) Discuss the pecking order of capital structure (6 marks)
- c) Use relevant examples in your country to discuss how financial development contributes to economic growth (10 marks)

Question Five

- a) Outline five assumptions of the Capital Asset Pricing Model (5 marks)
- b) The following information has been established for Nyakemincha Ltd , and distributor of exercise books

State of nature	Probability	Market Return R_m %	Return for the firm R_j %
A	0.2	22	-9
B	0.2	18	30
C	0.2	50	4
D	0.2	14	40
E	0.2	- 4	12

The risk-free rate is 8%. Find:

- i) The expected market return $E(R_m)$ (2 marks)
- ii) The variance of the market return $\delta^2(R_m)$ (2 marks)
- iii) The expected return for Nyakemincha Ltd $E(R_j)$ (2 marks)
- iv) Given that $cov(R_j, R_m) = -0.0048$ find B_j (3 marks)
- v) Using the above information state the CAPM (3 marks)

- vi) What is the required return for Nyakemincha Ltd? How does it compare with its expected return? (3 marks)