MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF BANKING, ACCOUNTING & FINANCE

FOURTH YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE (AGRIBUSINESS MANAGEMENT)

AGB 407: AGRIBUSINESS FINANCE AND CREDIT MANAGEMENT

DATE: 26/9/2019 **TIME: 2.00-4.00 PM**

INSTRUCTIONS: Attempt Question One and any other Two Questions

QUESTION ONE

a) An employer offers to start a pension plan for your 40-year-old brother. The plan is to place Kshs.5,000 at the end of each year in an account that earns 5% annually. Your brother wants to know how much will be in the account by retirement age at 60 years. He has asked you to assist him in his dilemma. Calculate the amount that will be in the account at retirement. (5 marks)

b) Peleka stores intends to buy a car in three years' time .The car will cost Ksh870 100.Peleka deposited Ksh200 000 in Hela bank at the beginning of the first year and sh 240 000 at the beginning of the second year. The bank pays10% interest on deposits.

c) Calculate the amount the business should deposit in the same bank account at the beginning of the third year so as to be in a position to buy the car. (5 marks)

d) On 31 March 2017 your Father gave you one and a half hectares farm near River Athi banks You prepared and planted Watermelon which in total cost you Shs.750,000. The total expenses up to harvest time amounted to another Shs.500,000 At the end of the season, a check of the records reveals the following:

Source of income	**Quantity in Tonnes**	Farmgate Price
Sale at the market	20	Shs.25000
Consumed	0.2	Shs.25,000
By-Product	0.3	Shs.5,000

Required:

(i) Calculate the total Gross income (6 Marks)

(ii) Determine the Gross margin for the farmer and gross margin per hectare. (4Marks)

(d). An investment has the following possible returns with associated probabilities:

Possible returns	20%	18%	15%	9%	6%
Probability	0.10	0.45	0.30	0.05	0.10

Required:

Calculate:

(i) Expected rate of return (4Marks)

(ii) Standard Deviation of the Expected Returns (6Marks)

QUESTION TWO

(a) Your father promised to give you a gift of Ksh.400,000 on your graduation which will be in one year's time. You are not sure what kind of investment you can put this money into and you decide to deposit it in a bank account paying 10% p.a interest. Three years after your graduation your Uncle offers to sell you an hectare of Land for Kshs.700,000 to commence an agribusiness. Your father recommends you take this offer and take a loan to top up the amount in your account and purchase this Land. How much loan will you take from the Bank? 8 Marks

(b) Farm resources can be divided Five categories called capital:

- Natural
- Human
- Physical
- Financial
- Social

Explain four of the above types of capital. (12 Marks)

QUESTION THREE

(a) What do you understand by the term "time value for money"? (3 marks)

(b) With the aid of a well labelled diagram, explain the three risk preference behaviours among managers and investors. (6 Marks)

(c) Hela Mingi Ltd has heard of two Securities X and Y and would like to invest in one of them. The Securities have the following characteristics.

Security X **Returns** **Probability**	**Security Y** **Returns** **Probability**
30% 0.1 20% 0.25 10% 0.35 5% 0.2 10% 0.1	6% 0.05 10% 0.25 20% 0.40 30% 0.20 40% 0.10

Required:

i) Calculate the expected return for each security. (4 Marks)

ii) Calculate the standard deviation of each security (4 Marks)

iii) Advise Hela Mingi Ltd on which security to invest in and justify your choice (4 Marks)

QUESTION FOUR

(a) What is meant by "term structure of interest rates"? (4Marks)

(b) With the aid of a well labelled diagram, explain the terms:

(i) Normal Yield Curve

(ii) Flat Yield Curve

(iii) Inverted Yield Curve (6Marks)

Explain three Theories of interest rates. (6 Marks)

(c) Suppose you bought a share of Simba Cement on 31 March 2014 for Sh.225. You expect to receive a dividend of Sh.2.50 and sell the share for Sh.272 after one year. Calculate your expected return at the end of the year. (4 Marks)

QUESTION FIVE

(a) List three items of cash flow for a farmer under each of the following two categories.

(i) Cash inflows

(ii) Cash outflows (6 Marks)

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(b)) A Farmer has Planted One Hectare of Red Onion. At the end of the season, a check of the records reveals the following:

Source of income	**Quantity in Tonnes**	Farmgate Price
Sale at the market	20	Shs.30000
Consumed	0.02	Shs.30,000
By-Product	0.03	Shs.50,000

The farmer had a total variable cost of Shs. 60,000.

Required:

(i) Calculate the total Gross income (4 Marks)

(ii) Determine the Gross margin for the farmer and gross margin per hectare. (2 Marks)