KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF ECONOMICS & FINANCE

EAE 302: ECONOMICS OF MICROFINANCE I

DATE: Monday, 8th May 2017 **TIME:** 4.30p.m-6.30pm

INSTRUCTIONS

(i) **Answer question ONE and any other TWO questions**
(ii) **Do not write on the question paper**
(iii) **Show your working clearly**

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QUESTION ONE (30 MARKS)

a) What are the five (5) risk factors a regulator of microfinance institutions look out for? **(5 marks)**

b) Consider an investor in Hong Kong trying to decide how to allocate her investment portfolio. Give four possible reasons why investing in Kenya or Uganda may seem not good for him than investing closer to home. **(4 Marks)**

c) Give four potential explanations of why moneylenders charge high interest rates. **(4 Marks)**

d) Consider an economy with two types of risk-neutral borrowers. Borrowers are protected by limited liability. There are one-period projects that require Kshs. 100,000 to be carried out. The bank is competitive—that is, it just wants to break even. Specifically, the bank wants to cover its gross cost, K = Kshs. 145,000 per Kshs. 100,000 loan. If she's able to borrow, an individual of type 1 is capable of generating a gross return Y_1 = Kshs. 230,000 with probability one. If she is denied access to credit, she can work and earn Kshs. 38,000.

If she's able to borrow, an individual of type 2 can invest and get a gross return Y_2 = Kshs. 420,000 with 50 percent probability, or zero with 50 percent probability. If she's denied access to credit, an individual of type 2 can work and obtain Kshs. 55,000. Assume that 40 percent of the population in this economy is of type 1, and 60 percent is of type 2.

i) If the bank cannot distinguish between the two types, and cannot implement group-lending-with-joint-responsibility mechanisms, which of the two types of

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borrowers will be "credit-rationed"? Compute the gross interest rates in this case and call it R*. **(6 Marks)**

ii) Now suppose that the bank is willing to lend to all individuals on the condition that all individuals form pairs and that each pair mutually accepts to be linked via a joint-responsibility clause—that is, if one individual fails, her partner has to pay for her. Otherwise, they will both be excluded from access to future loans. Assume assortative matching, in that type 1 individuals will only be willing to form pairs with type 1 individuals, and type 2 individuals will have no choice but forming pairs with other type 2s. (Is assortative matching a plausible outcome here?) Compute the interest rate in this case and call it R**. **(6 Marks)**

iii) Suppose the bank charges R**, and that there is one individual of type 1 that has no choice but to form a pair with an individual of type 2. Would the type 1 individual be willing to borrow under a joint responsibility clause in this particular case? Briefly explain your answer. **(5 Marks)**

QUESTION TWO (20 MARKS)

a) Name four other financial services, apart from loans, needed by poor households and communities. **(4 Marks)**

b) Differentiate between microfinance and microcredit. **(4 Marks)**

c) List six sources of funds for the operations of a microfinance institution. **(6 Marks)**

d) You have been employed as a loan manager in a microfinance institution. Describe the three stages in which agency problem may manifests itself when you are advancing loans to your customers. **(6 Marks)**

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QUESTION THREE (20 MARKS)

a) Suppose that a household derives income from a business whose only input is capital. The production function of the household is $y = AK^b$ where $b < 1$, A is a constant, and K is capital. Show that the marginal return to capital is decreasing in K. **(4 Marks)**

b) Why is the fact that moneylenders' marginal costs are below average costs a hallmark of monopolistic competition? **(8 Marks)**

c) Consider the following investment projects. A project could take place in Democratic Republic of Congo, where the probability of political turmoil in the district in question is one-half. If there is no political turmoil, an entrepreneur obtains a return of Kshs. 200,000. If political turmoil does take place, the entrepreneur does not get anything. Another project could take place in Britain, where the same entrepreneur may obtain a return of Kshs. 110,000 with certainty. Suppose that the same number of euros is required to obtain a positive return from a project in either country. Assume that the entrepreneur is considering investing in a project in either Democratic Republic of Congo or Britain. And suppose that the entrepreneur only wishes to maximize expected profit (i.e., she is risk-neutral). In which country would you predict that she will invest? Briefly explain your answer. **(8 Marks)**

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QUESTION FOUR (20 MARKS)

a) Local moneylenders typically charge very high interest rates. List four reasons for justification that can explain these high rates. **(4 Marks)**

b) With help of a diagram, explain how the marginal return to capital can help to determine the maximum interest rate that a lender can charge its customers. **(6 Marks)**

c) Most Microfinance clients cannot afford normal collateral such as land, machines and vehicles. Discuss five innovative/alternative forms of collateral used by MFI's. **(10 marks)**

QUESTION FIVE (20 MARKS)

a) Microfinance has grown most quickly in low-income countries. Explain four reasons for this phenomenal growth. **(4 Marks)**

b) Compare three main disadvantages of ROSCAs relative to credit cooperatives. **(6 Marks)**

c) Give four reasons why microfinance institutions are able to charge lower interest rates than local moneylenders. **(4 Marks)**

d) Suppose that you live in a low-income community, and that the government wants to help you by granting you the right to borrow Kshs. 120,000 at a subsidized interest rate of 6 percent per annum. State which of the following two strategies you would choose and why: (a) Invest the Kshs. 120,000 in your family business and obtain a net return of 15 percent per annum, but incur an effort cost equivalent to Kshs. 16,000 or (b) deposit the money in a nearby commercial bank that will pay you a yearly rate of 2.5 percent. **(6 Marks)**

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