

**INSTITUTE OF BANKERS IN MALAWI**

**ADVANCED DIPLOMA IN BANKING EXAMINATION**

**SUBJECT: FINANCIAL ECONOMICS (IOBM – AD301)**

**Date: Thursday, 16th May 2019**

**Time Allocated: 3 hours (08:00 – 11:00 Hours)**

**INSTRUCTIONS TO CANDIDATES**

1 This paper consists of **TWO** Sections, A and B.

2 Section A consists of 4 questions, each question carries 15 marks.

Answer **ALL** questions.

3 Section B consists of 4 questions, each question carries 20 marks. Answer **ANY TWO** questions.

4 You will be allowed **10 minutes** to go through the paper before the start of the examination, you may write on this paper but not in the answer book.

5 Begin each answer on a new page.

6 **Please write your examination number on each answer book used. Answer books without examination numbers will not be marked.**

7 All persons writing examinations without payment will risk expulsion from the Institute.

8 If you are caught cheating, you will be automatically disqualified in all subjects seated this semester.

9 DO NOT open this question paper until instructed to do so.

**SECTION A (60 MARKS)**

Answer **ALL** questions from this section

**QUESTION 1**

1. Define an annuity and discuss **two** types of annuity*. (7 marks)*
2. Define the sinking funds and give **two** common uses of sinking funds.

*(3 marks)*

1. List down what must be included in a standard presentation of a sinking fund schedule. *(5 marks)*

**(Total 15 marks)**

**QUESTION 2**

One of the cornerstones of Finance is risk, which is ‘the possibility that the actual future returns will be different from the expected return.’

1. Markowitz (1992) listed the tools for identifying a portfolio which has the highest return per level of risk. What was the premise of his theory? *(5 marks)*
2. With use of a diagram, describe systematic and unsystematic risk and how the risk can be reduced in the Capital Asset Pricing Model. *(10 marks)*

**(Total 15 marks)**

**QUESTION 3**

You are given the following possible returns and associated probabilities of an investment in a tea factory.

Rate of Return Probability

17% 19%

19% 18.7%

15% 17%

23.5% 12.5%

**Required**

Calculate the mean return and *(7 marks)*

standard deviation of security X *(8 marks)*

**(Total 15 marks)**

**QUESTION 4**

1. What do you understand by the term annuity and under what circumstance could it be used? *(4 marks)*
2. Give **two** types of annuities with clear examples for each. (6 marks)
3. Compare and contrast current yield and adjusted current yield. Give examples for each. *(5 marks)*

**(Total 15 marks)**

**SECTION B (40 MARKS)**

Answer ANY **TWO** questions from this section

**QUESTION 5**

The Phillips Curve showed a trade-off between unemployment and inflation. However, the problem that emerged with it in the 1970s was its total inability to explain unemployment and inflation going up together - stagflation. According to the Phillips curve they weren’t supposed to do that, but throughout the 1970s they did. Friedman then put his mind to whether the Phillips Curve could be adapted to show why stagflation was occurring, and the explanation he came up with was to include the role of expectations in the Phillips Curve - hence the name 'expectations-augmented' Phillips Curve.

**Required**

With the aid of a diagram, explain how the Natural Rate of Unemployment is achieved in an economy. **(Total 20 marks)**

**QUESTION 6**

1. Regression analysis is the statistical technique that identifies the relationship between two or more quantitative variables: comprising a dependent variable, whose value is to be predicted, and an independent or explanatory variable (or variables), about which knowledge is available. However, regression analysis has its own limitations.

**Required**

Discuss **five** limitations of regression analysis*. (10 marks)*

1. Discuss **three** components of compound interest rate*. (3 marks)*
2. Suppose that K155,850 is deposited into a bank account which earns interest at the effective annual rate of 17.5%. What is the balance after 7 years and 6 months? (*7 marks)*

***(Total 20 marks)***

**QUESTION 7**

1. A Malawi Government T-Bill with face value K205,000 is a security which is exchangeable for K205,000 on the maturity date. Suppose that a T-Bill with face value of K205,000 is issued on 08. 09.2006 and matures on 15.01.2007 (there are 129 days between the dates). Given that the price of the T-Bill is K199,375, find the annual rate of interest. *(10 marks)*
2. A principal amount of K1100 is invested in business at the beginning of the year, and the interest is accumulated at nominal annual rate of 13%, compounded monthly*. (10 marks)*

**(Total 20 marks)**

**QUESTION 8**

1. What does dispersion in financial economics mean? *(4 marks)*
2. Compare and contrast with examples the range and mean deviation. *(8 marks)*
3. What do you understand by the term annuity and under what circumstance could it be used? *(2 marks)*
4. Give **two** types of annuities with clear examples for each. *(6 marks)*

**(Total 20 marks)**

**END OF EXAMINATION PAPER**