



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

**MAIN EXAMINATION**

**UNIVERSITY EXAMINATIONS  
2023/2024 ACADEMIC YEAR**

**THIRD YEAR FIRST SEMESTER EXAMINATIONS**

**FOR THE DEGREE  
OF  
BACHELOR OF SCIENCE IN ECONOMICS**

**COURSE CODE: ECO 322**

**COURSE TITLE: ADVANCED MACROECONOMICS**

**DATE: FRIDAY, 15-12-2023**

**TIME: 3:00 -5:00**

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**INSTRUCTIONS TO CANDIDATES**

**ATTEMPT QUESTION ONE AND ANY OTHER TWO**

**TIME: 2 Hours**

**MMUST observes ZERO tolerance to examination cheating**

*This Paper Consists of 3 Printed Pages. Please Turn Over.*

### QUESTION ONE (COMPULSORY)

- a) Discuss the desired features of a National Accounting system. (10 marks)
- b) The Keynesian macroeconomic system specifies an investment function as  $I = I_0 + I(Y, r)$  where I-investment, Y-income, r-interest,  $I_0$  - autonomous investment. Examine the assumptions of the model and explain why the sensitivity of investment to income and interest rate is positive and non-positive respectively. (10 marks)
- c) Suppose that a closed economy with an economically active government has the specification  $Y = C + I + G_0$ ,  $C = c_0 + c(Y^d, r)$ ,  $Y^d = Y - T$ ,  $I = I_0 + I(Y, r)$ ,  $T = T_0 + T(Y)$  where Y-income, C-consumption, G-government expenditure,  $Y^d$ -disposable income, T-tax, r-interest rate. Examine the effect of taxation on equilibrium income. (10 marks)

### QUESTION TWO

- a) Various economies have their accounting systems based on the UN system designed in the mid-1960s. Examine the Kenyan system in relation the UN structure. (10 marks)
- b) Suppose that planned expenditure is given by  $E = C(Y^d) + I(Y, r) + G$  where Y-income, E-planned expenditure, C-consumption, G-government expenditure,  $Y^d$ -disposable income, T-tax, r-interest rate. How do equal increases in G affect the position of the IS curve? Specifically, what is the effect on Y for a given level of  $r$ ? (10 marks)

### QUESTION THREE

A three sector economy expenditure and monetary models are specified as  $Y = c_0 + C(Y^d, r) + I_0 + I(Y, r) + G_0$  and  $L = L_0 + L(Y, r) = M_0$  respectively. Examine the respective comparative static predictions and explain their respective consequences for the economy. (20 marks)

### QUESTION FOUR

In the Kenyan economy, the nominal interest rate has been established to be very low such that that opportunity cost of holding money is insignificant. Due to the prevail circumstance people are indifferent concerning the divisions of their wealth between money and other assets, and that they are therefore willing to change their money holdings without any change in the interest rate.

- a) Determine the slope of the Kenyan aggregate demand curve and suppose prices are completely flexible is aggregate demand relevant to output? (10 marks)
- b) Suppose that, in addition, planned expenditure depends on real wealth as well. Since public's holdings of high-powered money are one component of wealth, a fall in price level increases real wealth (so as AS curve is vertical), is aggregate demand irrelevant to output? (10 marks)

### QUESTION FIVE

- a) Explain what you understand by the term "comparative static" as used in macroeconomics, outlining its limitations (5 marks)
- b) The differential matrix version of an economic model is expressed as

$$\begin{bmatrix} 1 & -1 & -1 & 0 \\ -C_y(1-T_y) & 1 & 0 & 0 \\ -I_y & 0 & 1 & 0 \\ -T_y & 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} dY \\ dC \\ dI \\ dT \end{bmatrix} = \begin{bmatrix} dG_0 \\ dC_0 + C_r dr + C_y dT_0 \\ dI_0 + I_r dr \\ dT_0 \end{bmatrix}$$

- i. Extract the IS curve and explain whether it has a positive or a negative slope. (12 marks)
- ii. Explain the impact of government economic activity on the IS curve. (3 marks)

