LAIKIPIA UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST SEMESTER 2025/2026 ACADEMIC YEAR

FOURTH YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN ECONOMICS & STATISTICS

ECON 411: ADVANCED MACROECONOMICS

STREAM: ***BSC (ECON STAT)*** ***TIME: 2 HRS***

DAY: THURSDAY [8.30 A.M-10.30 A.M] ***DATE: 29/01/2026***

THIS QUESTION PAPER CONSISTS OF THREE (3) PAGES

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INSTRUCTIONS: Answer question one (Compulsory) and any other two questions

QUESTION ONE

a) Given the following equations

$$y = c(y - t(y)) + i(r) + g$$

$$\frac{M}{P} = l(r) + k(y)$$

i) Derive mathematically and graphically the IS and LM curves **(10 marks)**

ii) Show that IS curve is negatively sloped **(2marks)**

iii) With the use of a four-quadrant diagram, explain the transmission processes that bring about the new equilibrium following the tax cut on income. **(8 marks)**

b) Graphically and mathematically show how a labor demand curve of a competitive market is derived. **(10 marks)**

QUESTION TWO

Given the following equations

$Y = C + I + G + X$ where

$C = 100 + 0.9Y^d$ (Consumption function)

$I = 200 - 500r$ (Investment function)

$M = 0.8Y - 200r$ (Real money demand)

$X = 100 - 0.12Y - 500r$ (Net exports)

$G = 200$ (Government Purchases)

$T = 0.2y$ (Tax rate)

$L = 180$ (Real money Supply)

Required

i) Calculate fiscal and monetary multipliers and interpret them. **(10 marks)**

ii) Assess the effectiveness of fiscal policy and monetary policy multiplier **(10 marks)**

QUESTION THREE

a) Explain the following macroeconomics concepts **(10 marks)**
   i) Philips curve
   ii) Potential and actual output
   iii) Okun's law
   iv) Aggregate demand and aggregate supply

   v) Gross National Product

b) Discuss the backward bending of a labour supply curve **(10 marks)**

QUESTION FOUR

a) Using the four-quadrant diagram, discuss the effect of the following on the equilibrium interest rate (r) and income (y) **(10 marks)**

   i) An increase in the money supply
   ii) An increase in the price level
   iii) A decrease of government expenditure

b) Using a diagram, explain the concept of paradox thrift (when planned investment $(\bar{i})$ and government expenditure (g) is an increasing function of income(y) **(10 marks)**

QUESTION FIVE

The government of Kenya, in its macroeconomic policy, aims at achieving high economic growth. The government can influence economic growth by use of fiscal and monetary policies. The government is planning to influence growth by increasing its expenditure. As an economist, the government requests you to explain the effects of such a policy on income, price level, interest rate and employment. Use well labelled diagrams, paying attention to the transmission processes from initial equilibrium to the ultimate equilibrium. **(20 marks)**