MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

THIRD YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF ECONOMICS AND STATISTICS

BACHELOR OF ECONOMICS

EET 301: MACROECONOMIC THEORY III

DATE: 20/1/2021 **TIME:2.00-4.00 PM**

INSTRUCTIONS:

(i) Answer question one (Compulsory) and any other two questions

(ii) Do not write on the question paper

(iii) Show your workings clearly

QUESTION ONE (COMPULSORY) (30 MARKS)

a) Using a diagram explain the meaning of a business cycle (8 marks)

b) There are two measurements of Gross National Product (GNP) or Gross Domestic Product (GDP).

i. Nominal GNP or GDP

ii. Real GNP or GDP

Explain the difference between the two. (2 marks)

c) Use the four-quadrant diagram to analyze the effects of price level increase on income and interest rates. (7 marks)

d) Proof that a profit maximizer in a perfectly competitive market will employ labour up to the point where the value of marginal product of labour equals the price of labour . Use the information to derive the curve for demand for labour (7 marks)

e) Compute the following multipliers assuming that tax is an increasing function of income.

i. Investment Multiplier (3 marks)

ii. Balanced Budget Multiplier (3 marks)

QUESTION TWO (20 MARKS)

a) Illustrate using the four quadrant diagram how each of these policies will affect equilibrium output and interest rates.

i. A contractionary fiscal policy

ii. A contractionary monetary policy (12 marks)

b) Use a diagram to explain the difference between Potential output and actual output (4 marks)

c) Present the labour supply curve graphically and explain why individual Labour supply curve is backward bending? (4 marks)

QUESTION THREE (20 MARKS)

a) The IS curve represents equilibrium in the product market. Derive the IS curve using the four quadrant diagram. (4 marks)

b) Suppose the equilibrium in the Product market is given by:

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

Derive the Slope of the IS curve. Is it positive or negative? Explain your answer. (6 marks)

c) Given the following equations, derive the expression for the IS curve. (4 marks)

$C = 100 + 0.8Y^d$ (Consumption function)

$I = 10 - 10r$ (Investment function)

$G = 10$ (Government purchases)

$T = 0.25$ (Tax rate)

d) Derive and draw the Labour Supply curve for a Monopolist and explain how it differs from the labour supply curve for a perfectly competitive firm. (6 marks)

QUESTION FOUR (20 MARKS)

a) What is an LM Curve? (1 mark)

b) Trace the LM Curve using the four quadrant diagram (4 marks)

c) Is the LM curve positively or negatively sloped? Prove your answer. (5 marks)

d) Given the following equations, derive the LM curve equation. (3 marks)

$L = Y - 100r$ (Real money demand)

$\bar{m} = 295$ (Real money supply)

e) What is Monetary and Fiscal Policy Mix? (2 marks)

f) Suppose for instance, the economy is experiencing interest rates that are too low for equilibrium in the economy. Explain how a policy mix can be used to correct the situation in this economy. (5 marks)

QUESTION FIVE (20 MARKS)

a) Demonstrate graphically the concept of 'paradox of thrift' (7 marks)

b) Analyze using the four quadrant diagram the effect of a tax cut on income and interest rates (7 marks)

c) Demonstrate the equilibrium condition in the labour market (6 marks)