



# MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

THIRD YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF ECONOMICS

EET 301: MACROECONOMIC THEORY III

DATE: 24/3/2021

TIME: 2.00-4.00 PM

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## 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) Distinguish between the following concepts as used in macroeconomics: (12 marks)
- i. Potential GDP and actual GDP
  - ii. Phillips Curve and Okun's Law
  - iii. Recession and Recoveries
  - iv. Fiscal Policy Multiplier and Monetary Policy Multiplier
- b) The government of Kenya through treasury has decided to increase government spending in order to increase the pace of economic growth. Use the four-quadrant diagram to analyze the effects of this measure on income and interest rates. (8 marks)
- c) Given the following equations:
- $$Y = C + I + G + X$$
- $$C = 100 + 0.9Y^d \quad (\text{Consumption function})$$
- $$I = 200 - 500r \quad (\text{Investment function})$$
- $$M = 0.8Y - 2000r \quad (\text{Real money demand})$$
- $$X = 100 - 0.12Y - 500r \quad (\text{Net export})$$

$G = 200$	(Government purchases)
$T = 0.2$	(Tax rate)
$L = 800$	(Real money supply)

**Required**

Calculate the monetary and fiscal policy multipliers and interpret them. (10 marks)

**QUESTION TWO (20 MARKS)**

- a) 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 (8 marks)
- b) Compute the following multipliers assuming that tax is an increasing function of income.
  - i. Investment Multiplier (3 marks)
  - ii. Balanced Budget Multiplier (3 marks)
- c) Present the labour supply curve graphically and explain why individual Labour supply curve is backward bending? (6 marks)

**QUESTION THREE (20 MARKS)**

- a) The IS curve represents equilibrium in the product market. Derive the IS curve using the four-quadrant diagram. (5 marks)
- b) Use the four-quadrant diagram to analyze the effects of price level increase on income and interest rates. (7 marks)
- c) Given the following model:

$C = 100 + 0.8Y^d$	(Consumption function)
$I = 10 - 10r$	(Investment function)
$G = 10$	(Government purchases)
$T = 0.25$	(Tax rate)
$L = Y - 100r$	(Real money demand)
$\bar{m} = 295$	(Real money supply)

**Required:**

- i. Compute the slope of the IS Curve and interpret it (4 marks)
- ii. Compute the slope of the LM Curve and interpret it (4 marks)

**QUESTION FOUR (20 MARKS)**

- a) 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. (7 marks)
- b) Demonstrate graphically the concept of ‘paradox of thrift’ (6 marks)
- c) 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. (7 marks)

**QUESTION FIVE (20 MARKS)**

- a) Analyze using the four quadrant diagram the effect of a contractionary monetary policy on income and interest rates (7 marks)
- b) This major issue in an economy is concerned with determining how big the GDP is. To determine the size of an economy’s GDP we make use of a set of analytical assumptions underlying national income accounting. Clearly explain these assumptions. (8 marks)
- c) Explain how the slope of the IS curve affects the effectiveness of fiscal policy (5 marks)