# MACHAKOS UNIVERSITY

**University Examinations for 2019/2020 Academic Year**

**SCHOOL OF BUSINESS AND ECONOMICS**

**DEPARTMENT OF ECONOMICS**

**THIRD YEAR SECOND SEMESTER EXAMINATION FOR**

**BACHELOR OF ECONOMICS AND STATISTICS**

**BACHELOR OF ECONOMICS AND FINANCE**

**BACHELOR OF ECONOMICS**

**BACHELOR OF ARTS**

**EET 301: MACROECONOMIC THEORY III**

**DATE:  17/11/2020**                                                        **TIME:8:30 – 10:30 AM**

**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)     Discuss the following concepts as used in Macroeconomics

   i)      Aggregate problem                                              (3 marks)

   ii)     Okun's Law                                                     (2 marks)

   iii)    Price indices                                                  (2 marks)

   iv)     Fiscal and Monetary policy multipliers                         (2 marks)

   v)      Policy mix                                                     (1 mark)

b)     Kenya's Economy has been experiencing high levels of unemployment which has led to slow rate of economic growth through the multiplier process. Suppose the government decides to stimulate the economy in order to reduce unemployment using both fiscal policy and monetary policy;

Illustrate using the four-quadrant diagram how each of these policies will affect equilibrium output and interest rates in the economy.                                      (10 marks)

c)      Given the following equations:

$Y = C + I + G + (X\text{-}M)$

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

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

$L = 0.8Y - 2000r$       (Real money demand)

$(X\text{-}M) = 100 - 0.12Y - 500r$    (Net export)

$G = 200$                  (Government purchases)

$T = 0.2$                   (Tax rate)

$L = 800$                   (Real money supply)

**Required**

i)      Derive the equations for IS and LM curves.                         (4 marks)

ii)     Compute the r and y at which the two markets are clearing          (3 marks)

iii)    Compute the values of C, I, and M.                                 (3 marks)


## QUESTION TWO (20 MARKS)

a)      Using the individual work-leisure decision, demonstrate how the labour supply curve id derived.                                                                    (10 marks)

b)      Illustrate graphically the effects of a decrease in the desire to save on equilibrium income under these circumstances:

i.      When $\bar{i}$ and g are independent of y and                       (5 marks)

ii.     When $\bar{i}$ and g are increasing functions of y.                 (5 marks)

## QUESTION THREE (20 MARKS)

a)      Demonstrate using the four quadrant diagram how the LM curve is derived          (6 marks)

b)      Given the two market equilibrium conditions as follows:

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

Money market: $\dfrac{\bar{m}}{P} = l(r) + k(y)$

(i)     Derive the Fiscal Policy Multiplier                                 (8 marks)

(ii)    When is fiscal Policy most effective, fairly effective and ineffective? Explain.

(6 marks)

**QUESTION FOUR (20 MARKS)**

a) Explain the effect of an increase in planned investment on equilibrium income when investments and government expenditure are increasing functions of income (5 marks)

b) Using the equilibrium conditions in product and money markets derive the monetary policy Multiplier. (7 marks)

c) Given the following equations from a certain economy:

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

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

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

$G = 10$ (Government purchases)

$T = 0.25$ (Tax rate)

$M = 295$ (Real money supply)

**Required**

Derive the slope of the LM curve and demonstrate how it affects the effectiveness of monetary policy (8 marks)

**QUESTION FIVE (20 MARKS)**

a) Explain using a well labelled diagram the concept of paradox of thrift (6 marks)

b) Since the repealing of the interest rate capping policy in Kenya, many financial institutions have increased their lending rates which coupled with other factors has led to the reduction in investments. Explain how a policy mix can be used to correct the situation in the economy. (7 marks)

c) 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)