



MACHAKOS UNIVERSITY

University Examinations for 2017/2018

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

TYEAR YEAR FIRST 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: 18/12/2017

TIME: 11:00 – 1:00 PM

INSTRUCTIONS: Answer Question ONE and any other TWO questions

QUESTION ONE (COMPULSORY(30 MARKS))

- a) Okun's law is the law named after its discoverer, Arthur Okun who used it to illustrate the effects of macroeconomic policy. State the Okun's law. (2 marks)
- b) Assume given equation $y = c(y - t(y)) + i(r) + g$ derive IS curve mathematically and sketch its diagram. (6 marks)
- c) Given the following equations, calculate the fiscal policy multiplier and interpret it. (8 marks)

$$C = 100 + 0.8Y^d \quad (\text{Consumption function})$$

$$I = 10 - 10r \quad (\text{Investment function})$$

$$L = Y - 100r \quad (\text{Real money demand})$$

$$G = 10 \quad (\text{Government purchases})$$

$$T = 0.20 \quad (\text{Tax rate})$$

$$M = 250 \quad (\text{Real money supply})$$

- d) Using Euler's theorem show output measure of GDP. (5 marks)
- e) Graphically represent the steady state of swan-Solow model. (4 marks)
- f) Explain the following terms as used in macroeconomic theory (5 marks)
 - i) Recession
 - ii) Macroeconomics theory
 - iii) Real GNP and GDP
 - iv) Philips curve
 - v) Price indices

QUESTION TWO (20 MARKS)

- a) Using general national income identity and assuming lump sum tax derive general equilibrium multiplier. (5 marks)
- b) Show algebraically that introduction of the tax rate (tax revenue depend on national output) reduces the general equilibrium multiplier. (7 marks)
- c) Given the following equations, derive the LM curve equation. (3 marks)

$$L = Y - 100r \quad (\text{Real money demand}) \text{ and } \bar{m} = 295 \quad (\text{real money supply})$$

- d) Show mathematically that Labour and capital each contribute an amount equal to their individual growth rates multiplied by the share of that input in income. (5 marks)

QUESTION THREE (20 MARKS)

- a) Let assume given $\delta = 25\%$ per year; $\alpha = 12$ and $\Delta Y = 150m$ Per year. Calculate the percentage at which income must grow to maintain full employment. (7 marks)
- b) Harrod-Domar model is one of growth model. Briefly explain the limitation of this model. (5 marks)
- c) Explain the impact of the following changes to national output: (8 marks)
- i) Increase in desire to save
 - ii) Shift in planned investment
 - iii) Increased lump sum tax
 - iv) Increased propensity to consume

QUESTION FOUR (20 MARKS)

- a) Explain and compare the role of macroeconomics and microeconomics. (5 marks)
- b) With the help of well labeled diagram explain the relationship between inflation and unemployment. (5 marks)
- c) Explain giving examples the fiscal and monetary policies in place in Kenya. (6 marks)
- d) Explain the effectiveness of fiscal policy with the help of well labeled diagram (4 marks)

QUESTION FIVE (20 MARKS)

- a) Explain the following terms (2 marks)
- The balance of payment
 - The rate of economic growth

- b) Given the following equations for a certain economy:

$$Y = C + I + G + X \quad (\text{Income identity})$$

$$C = 100 + 0.9Y^d \quad (\text{Consumption function})$$

$$I = 200 - 500r \quad (\text{Investment function})$$

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

$$G = 200 \quad (\text{Government purchases})$$

$$T = 0.2 \quad (\text{Tax rate})$$

$$L = Y - 100r \quad (\text{Real money demand})$$

$$M = 800 \quad (\text{Real money supply})$$

Determine the following:

- Derive equations for IS and LM curves (5 marks)
- Determine the r and y pair at which the two markets are clearing (5 marks)
- Compute the values of C , I , X and L (8 marks)