



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

..... YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF ECONOMICS AND STATISTICS

BACHELOR OF ECONOMICS AND FINANCE

BACHELOR OF ECONOMICS

BACHELOR OF ARTS

EET 401: MACROECONOMIC THEORY IV

DATE:

TIME:

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)

- a) Many theories have been put forward to explain consumption behaviour. Compare and contrast the lifecycle and relative income hypotheses. Which one is more practical and why? (12 marks)
- b) Derive the money multiplier and explain how it affects money supply (8 marks)
- c) Given the following intertemporal optimizing model of consumption patterns:

$$\max_{c_t} \sum_0^T \frac{\ln c_t}{(1 + \delta)^t},$$

Subject to the constraint that

$$\sum_0^T \frac{c_t}{(1 + r)^t} = \sum_0^T \frac{y_t}{(1 + r)^t}.$$

Show that whether consumption rises, falls or remains constant over time depends on whether the market rate of return is larger or smaller than the individual's discount rate (10 marks)

QUESTION TWO (20 MARKS)

a) Explain using the neoclassical growth Model how the following changes affect variables in the steady-state:

- i. An increase in the savings rate
- ii. An increase in Population growth (8 marks)

b) In reference to transactions demand for money theory where consumers are also investors, and with draw cash only for spending and part of their income not withdrawn remains with the bankers or brokers in form of bonds. Assume a representative consumer with y as real income which he intends to spend within period T . Let the number of transactions (bank withdrawals or with the broker) be n , the cost of each transaction is α and the interest rate on the bonds is r .

Derive the expression for the optimal number of transactions and explain the relationship between n and r , T , y and α . (12 marks)

QUESTION THREE (20 MARKS)

- a) Derive and explain the Tobin's Marginal q theory of investment. (10 marks)
- b) Illustrate the effect of deficit financing on the IS and LM curves (5 marks)
- c) Explain the effect of an increase in aggregate demand on employment (5 marks)

QUESTION FOUR (20 MARKS)

a) In line with the Solow growth model, using the following information:

$$k_t = \frac{K_t}{A_t L_t}, L_t = L_0 e^{nt}$$

$$y_t = k_t^\alpha, A_t = A_0 e^{gt}, \dot{K}_t = sY_t - \delta K_t$$

- i. Derive the law of motion of capital per effective worker/labour (6 marks)

- ii. Determine the balanced growth path level of capital per effective worker (6 marks)

- iii. Explain two predictions of the Solow growth model (4 marks)

b) Explain four methods that the government can use to finance a deficit (4 marks)

QUESTION FIVE (20 MARKS)

- a) Compare and contrast the effectiveness of monetary policy under a floating exchange rate regime under the following assumptions:
- i. Perfect capital mobility
 - ii. Imperfect capital mobility (12 marks)
- b) Explain the effect of wage and price rigidity in the labour market (8 marks)