UNIVERSITY OF SWAZILAND

FACULTY OF SOCIAL SCIENCE

DEPARTMENT OF ECONOMICS

MAIN EXAMINATION PAPER: DECEMBER 2016

TITLE OF PAPER: MACROECONOMICS

COURSE CODE: ECO 203

TIME ALLOWED: 2HRS

INSTRUCTIONS TO CANDIDATES

1. ANSWER QUESTIONS 1 AND ANY OTHER 2 QUESTIONS

2. BEGIN EACH QUESTION ON A NEW PAGE

REQUIREMENTS

1. SCIENTIFIC CALCULATOR

DO NOT OPEN THIS PAPER UNTIL YOU HAVE BEEN INSTRUCTED TO DO SO

Question 1 – Compulsory **[40]**

a) Suppose we have an economy described by the following equations

$$C = 50 + 0.8YD$$

$$\bar{I} = 70$$

$$\bar{G} = 200$$

$$\overline{TR} = 100$$

$$\bar{T} = 0.20$$

$$NX = 0$$

i) Calculate the level of income and the multiplier in this model. [5]

ii) Suppose that the tax rate increases to 0.25, what is the new equilibrium level of income? [2]

iii) Suppose that government reduces transfer payments by 10million and increase government purchases by 10million. What will be the change in the equilibrium level of income? [5]

b) The following equation describes an economy

$$C = 0.8(1 - t)Y$$

$$t = 0.25$$

$$I = 900 - 50i$$

$$\bar{G} = 800$$

$$L = 0.25Y - 62.5i$$

$$\frac{\bar{M}}{\bar{P}} = 500$$

$$NX = 0$$

i) What is the equation that defines the IS curve? [4]

ii) What is the equation that describes the LM curve? [4]

iii) What are the equilibrium levels of income and interest rates? [6]

iv) Describe in words the conditions that are satisfied by the intersection of the IS and LM curves, explain why this is an equilibrium. [2]

c) Assume we can postulate an open economy given by the system of equations below and further, assuming that interest rate are given, and the real exchange rate is constant.

Aggregate spending by domestic residents is given by

$$A = \bar{A} + cY - bi$$

Net Exports are given by

$$NX = X - Q$$

Import Spending

$$Q = \bar{Q} + mY$$

Exports are given

$$X = \bar{X}$$

i) Formulate a mathematical model that shows an open market equilibrium. [5]

ii) What is the equation for the balance of payments. [2]

iv) Given that $\bar{A} = 400\ c = 0.8\ b = 0.05\ \bar{Q} = 0\ m = 0.2\ X = 250$, calculate the equilibrium level of income and the balance of payments. [5]

Answer any Two Questions

Question 2

a) Define an open market operation by the Central Bank of Swaziland? Give examples of each and state how they function in sweeping or creating liquidity in the market. [10]

b) Using a graphic model, show the impact of an open market purchase on interest and output. Be concise in your analysis and clearly show the transmission mechanism and the equilibration process. [20]

Question 3

a) What is a liquidity trap? And when is it likely to occur? [10]

b) If the economy was stuck in a liquidity trap, would you advise the use of monetary or fiscal policy? (Use graphic models in your explanation) [20]

Question 4

a) What is crowding out? [5]

b) When would you expect it to occur? [5]

c) In the face of substantial crowding out, which would be more successful – monetary or fiscal policy? (make use of graphic models in your explanation). [20]

Question 5

a) Assume that capital is perfectly mobile, the price level is fixed and the exchange rate is fixed. What would be the effects of an increase in government purchases? [20]

b) Outline any five macroeconomic objectives [10]