MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2015/2016

FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE DEGREE OF MASTER OF ARTS IN ECONOMICS

CITY CAMPUS - WEEKEND

AEC 802: ADVANCED MACRO ECONOMICS

Date: 24th April, 2016 Time: 9.00 - 12.00 noon

INSTRUCTIONS:

- Answer question FOUR questions.
- Each question carries 15 marks.

QUESTION ONE

A certain hypothetical economy's equilibria in the expenditures and monetary sectors are represented as below:

$Y = C_o + C[Y - (T_0 + T(Y) + R, r] + I_o + I(Y, r) + G_o$ *(Expenditures sector)*

$L_o + L(Y, r) = M_o$ *(Monetary sector)*

Note: All variables and characters carry equal connotations used in macro economic analysis.

(a). Derive and show, in total differential form, the relevant matrix equation describing the two-sector system. (5marks)

(b). Solve the system and give the equations for $d\bar{Y}$ *and* $d\bar{r}$ (4marks)

(c). Derive the expression for the government expenditure multiplier, and explain its meaning. (3marks)

(d). Derive and explain the zero budget multiplier. (3marks)

QUESTION TWO

Discuss the Classical and Keynesian contributions that led to the development of modern macroeconomics. (15marks)

QUESTION THREE

Consider the following two economic systems, one with an active Government and the other with a docile Government;

(i). $Y = C_o + C[Y - (T_0 + T(Y), r] + I_o + I(Y, r) + G_o$ *(Expenditures sector with an active government)*

(ii). $Y = C_o + C(Y, r) + I_o + I(Y, r)$ *(Expenditure sector with an inactive government)*

(a). Give in total differential form, equilibrium income and rate of interest for each of the economic systems. (5marks)

(b). By comparing the two economic systems, establish the impact of government activity on the exogenous expenditure multiplier. (6marks)

(c). Show using a diagram, effect of the government activity on the economy's GDP over time. (4marks)

QUESTION FOUR

Assuming that the monetary sector of an economy is defined by the following specifications; $M^* = \frac{M_0}{P}$, $L=L_0+L(Y,r)$

Where: M^* = Real money supply and that L = Liquidity preference,

(i). Derive and show, in total differential form the equilibrium income and rate of interest for the sector. (5marks)

(iii). Determine $\frac{d\bar{r}}{dm_o}$, $\frac{d\bar{r}}{dL_o}$, $\frac{d\bar{r}}{dP}$ and $\frac{d\bar{r}}{dY}$ (6marks)

(iv). Explain the meaning of $\frac{d\bar{r}}{dP}$ and $\frac{d\bar{r}}{dm_o}$ (4marks)

QUESTION FIVE

(a). Algebraically derive the Fried Man permanent income hypothesis. (8marks)

(b) Critically examine the permanent income hypothesis. (7marks)

QUESTION SIX

Assume that an economy is described by the following simultaneous equations

$Y=C_o+C[Y-(T_0+T(Y),r]+I_o+I(Y,r)+G_o$ (*Expenditur es* sec *tor with an active government*)

$L_0+L(Y,r)=P^{-1}M_0$ (*Monetary* sec *tor*)

$Y=y(N_F)$ (Pr *oduction and employment* sec *tor*)

Where N_F = *Full employment level*

If the differential matrix equation describing the behaviour of this macro system is given as:

$$\begin{bmatrix} [1-C_y(1-T_y)-I_y] & -(C_r+I_r) & 0 \\ L_y & L_r & M_0P^{-2} \\ 1 & 0 & 0 \end{bmatrix} \begin{bmatrix} \partial Y \\ \partial r \\ \partial P \end{bmatrix} = \begin{bmatrix} \partial C_0+\partial I_0+\partial G_0-C_y\partial T_0 \\ P^{-1}M_o-\partial L_0 \\ 0 \end{bmatrix}$$

Note: All variables and characters carry equal connotations used in macro economic analysis.

(a). On the basis of information provided above, determine $\partial\bar{Y}$, $\partial\bar{r}$ *and* $\partial\bar{P}$.(6marks

(b) Determine and interpret; $\frac{\partial\bar{r}}{\partial m_o}$; $\frac{\partial\bar{r}}{\partial G_0}$ (4marks)

c). Determine and explain the impact of a change in the exogenous spendings on the equilibrium price. (5marks)