KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF ECONOMICS AND MASTER OF ECONOMICS (ECONOMETRICS)

EET 803: ADVANCED MACROECONOMICS THEORY II

DATE: Monday 8th May 2017 **TIME: 9.00a.m -12.00p.m**

INSTRUCTIONS

Answer **ALL Questions**

QUESTION ONE

(a) Using the mechanism for adjusting expectations, differentiate between static, adaptive and rational expectations. **[6 Marks]**

(b) A Ramsey-Cass-Koopmans economy has a representative household with the following optimization behaviour:

$$\text{Max} \qquad U = B\int_{t=0}^{\infty} e^{-\beta(t)}\frac{c(t)^{1-\theta}}{1-\theta}dt$$

s.t:

$$\int_{t=0}^{\infty} e^{-R(t)}c(t)\frac{A(0)L(0)e^{(n+g)t}}{H}dt \le k(0)\frac{A(0)L(0)}{H}+\int_{t=0}^{\infty} e^{-R(t)}w(t)\frac{A(0)L(0)e^{(n+g)t}}{H}dt$$

Where $B \equiv \dfrac{A(0)^{1-\theta}L(0)}{H}$ and $\beta \equiv \rho - n - (1-\theta)g > 0$.

(i) Derive the Euler equation for the maximisation problem. You are required to interpret your result; **[5 Marks]**

(ii) Present the phase diagram for the dynamics of consumption (c) and capital stock (k) per unit of effective labour, and explain thè quadrant where both the values of c and k are increasing; **[4 Marks]**

(c) With the use of well labelled diagrams and expressions, demonstrate the impact of a change in saving on output and consumption in the Solow model. **[6 Marks]**

(d) The Kenyan economy has the following production function:

$Y = F(K,N) = AK^{\alpha}N^{1-\alpha}$, where $\alpha < 1$.

Let g_A be the growth rate of A, g_N be the growth rate of N, and δ be the rate of depreciation in this economy.

(i). Verify that the above production function has the property of constant returns to scale and explain its implication. **[2 Marks]**

(ii). Verify that the above production function is concave in capital. What is the macroeconomic interpretation of this result? **[2 Marks]**

QUESTION TWO

(a) Explain how the Hodrick- Prescott filter is used to separate the cyclical component in output from the growth component. **[5 Marks]**

(b) Differentiate between the Diamond Model and the Ramsey Cass Koopmans Model as used in macroeconomics. Provide the details of the two models. **[5 Marks]**

(c) With the use of elaborate equations, present the Real Business Cycle Model. What are the postulations of this model in terms of flactuations. **[5 Marks]**

QUESTION THREE

Inflation targeting is perhaps the most prominent intermediate monetary policy target today. Inflation targeting monetary framework does focus on only controlling inflation. Central banks in inflation targeting countries are also pre-occupied with moderating output volatility. minimising large gyrations in interest rates, keeping the financial system stable, among others. In the literature, two dominant views of inflation targeting have emerged. The fist is that inflation targeting is merely conservative window-dressing, while the second is that inflation targeting matters.

i) Give a clear explanation of inflation targeting **[3 Marks]**

ii) Explain three main pre-requisites for successful inflation targeting framework **[9 Marks]**

iii) Give two reasons that could hinder inflation targeting monetary policy in African countries. **[3 Marks]**

QUESTION FOUR

Indicate whether the followings are TRUE, FALSE or UNCERTAIN. Explain your answer.

a. Given that the permanent income hypothesis describes household behaviour accurately, a temporary increase in real household income leaves household consumption unaffected. **[3 Marks]**

b. Hodrick Prescott filter is superior to Growth Accounting in macroeconomics **[3 Marks]**

c. A central bank with credibility can reduce inflation without any increase in unemployment in the short-run. **[3 Marks]**

d. The government can increase seigniorage by lowering the rate of money growth. **[3 Marks]**

e. Inflation means higher prices so the demand for money rises in the economy. **[3 Marks]**