AFRICAN ECONOMIC RESEARCH CONSORTIUM

Collaborative PhD Programme in Economics for Sub-Saharan Africa

COMPREHENSIVE EXAMINATIONS IN CORE AND ELECTIVE FIELDS
FEBRUARY 14 – MARCH 6, 2018

INTERNATIONAL ECONOMICS

Time: 08:00 – 11:00 GMT   **Date: Tuesday, March 6, 2018**

INSTRUCTIONS:

Answer a total of FOUR questions: ONE question from Section A, ONE question from Section B, and TWO questions from Section C; one of which MUST be Question 5 or 6 and the other Question 7 or 8.

The sections are weighted as indicated on the paper.

SECTION A: (15%)

Answer only ONE Question from this Section

Question 1

Country 1 is a small country that cannot affect world price. It imports good *X* at the price of $10 per unit. The domestic supply and domestic demand curves for good *X* are:

$$S = 60 + 20P$$

$$D = 1160 - 15P$$

(a) Assume Country 1 is completely open to trade. What is the equilibrium price and quantity consumed? How much is produced domestically and how much is imported?
                                                                                    (3 marks)

(b) Now assume that country 1 imposes an import quota of 400 units. What happens to the price of good *X* and quantity consumed?   **(3 marks)**

(c) Explain the effect of the quota on consumers, producers and importers of good *X*.
                                                                                    (9 marks)

Question 2

Explain the effectiveness of fiscal and monetary policy under a flexible exchange rate regime with perfect capital immobility (answer separately for fiscal and monetary policy).
                                                                                    (15 marks)

SECTION B: (25%)

Answer only ONE Question from this Section

Question 3

(a) Explain the Leontief (1953) paradox.   **(15 marks)**

(b) Highlight Leamer's (1980) reformulation of the Leontief paradox.   **(10 marks)**

Question 4

The Balassa-Samuelson model helps explain why the Purchasing Power Parity does not necessarily hold in terms of aggregate price indices. Based on the traded and non-traded goods decomposition, show the proof of the Balassa-Samuelson thesis (your answer must include the key assumptions of the model).   **(25 marks)**

SECTION C: (60%)

Answer TWO Questions from this Section;

One of which MUST be Question 5 or 6 and the other Question 7 or 8

Question 5

"The impact of a quota and tariff on a small country can be the same. However, there are circumstances when they differ." Discuss.   **(30 marks)**

Question 6

Imagine a world in which there are two kinds of production: agriculture and manufacturing. Agricultural production is characterized by constant returns to scale, while the manufacturing sector is characterized by increasing returns to scale. Further, assume that transport is costless in the agricultural sector, while transportation costs for the manufactured goods exist in a Samuelson's "iceberg" form.

Using the Krugman (1991) two-country model, show that both countries will produce manufacturing products only if they are sufficiently similar in size. However, if countries are unequal in size, the larger country will produce all the increasing returns to scale products.
                    (30 marks)

Question 7

Consider the following standard Keynesian model that includes external trade:

$$\text{National income identity: } y = c + i + x - Z,$$
$$\text{Consumption function: } c = c(\alpha_c, y),$$
$$\text{Investment function: } i = i(\alpha_i, y),$$
$$\text{Import demand function: } Z = Z(\alpha_z, y),$$
$$\text{Export function: } x = \bar{x},$$
$$\text{Balance of payments: } B = \bar{x} - Z(\alpha_z, y),$$

The variable y is real income and α_k (*where $k = c, i$ and Z*) are the shift parameters.

(a) Derive the expression for the change in y (dy). **(8 marks)**

(b) Specify the expression for the total effect of trade flows on the balance of payments. **(7 marks)**

(c) Find the effect of an exogenous increase in exports on the balance of payments when the marginal propensity to absorb is:

   (i) less than one; **(5 marks)**

   (ii) equal to one; and **(5 marks)**

   (iii) greater than one. **(5 marks)**

Question 8

Consider the flexible-price monetary approach to exchange rate determination.

(a) Develop a simple model of exchange rate determination. **(10 marks)**

(b) Based on (a) above, derive an equation showing both the fundamental and non-fundamental determinants of exchange rate. **(10 marks)**

(c) Assume that the foreign variables do not change in (a), show and explain the effects of money supply on exchange rate and the price level. **(10 marks)**