AFRICAN ECONOMIC RESEARCH CONSORTIUM

Collaborative PhD Programme in Economics for Sub-Saharan Africa

COMPREHENSIVE EXAMINATIONS IN CORE AND ELECTIVE FIELDS

FEBRUARY 11 – MARCH 2, 2015

HEALTH ECONOMICS

Time: 08:00 – 11:00 GMT **Date: Wednesday, February 25, 2015**

INSTRUCTIONS:

Answer a total of FOUR questions: ONE question from Section A, ONE question from Section B, and TWO questions from Section C.

The sections are weighted as indicated on the paper.

SECTION A (15%): 27 Minutes

Answer only ONE Question from this Section

Question 1

(a) Explain the contexts in which preventive and curative care can be:

(i) Substitutes to each other [**4 Marks**]

(ii) Complements to each other. **[4 Marks]**

(b) Explain the relationship between socioeconomic status and population health. **[7 Marks]**

Question 2

Briefly explain how the following concepts are applied in health economics.

(a) Production functions for health services provision. **[5 Marks]**

(b) Elasticity of substitution of doctors and nurses. **[5 Marks]**

(c) Isoquant in provision of antenatal care. **[5 Marks]**

SECTION B (25%): 45 Minutes

Answer only ONE Question from this Section

Question 3

(a) It is often assumed that there is a difference in the quality of care between for-profit, non-profit and government hospitals.

(i) Use the Chalkley and Malcomson (2000) framework on quantity, quality and cost-reducing effort to explain why such a difference may exist. **[5 Marks]**

(ii) Is there any empirical evidence of this difference? **[5 Marks]**

(iii) What problems arise in measuring healthcare quality? **[5 Marks]**

(b) Stakeholders to any project are fundamentally different, because their interests are different. Analyzing the stakeholders involve categorizing them into "primary audience" and "secondary audience".

Based on the concepts of "interest" and "power", how are stakeholders classified into "primary audience" and "secondary audience"? Support your explanation with appropriate diagram. **[10 Marks]**

Question 4

Consumption of illicit brews is associated with major health problems. Suppose that the market for illicit brews in County X is characterized by the following supply and demand functions:

$$Q_d = 100 - P$$

$$Q_s = 40 + 2P$$

(a) What is the equilibrium price and quantity? Comment on price elasticity of demand and supply. **[8 Marks]**

(b) Assume there is a crackdown on smugglers of illicit brew from the neighbouring country, which has the effect of increasing the price by 10 currency units. What is the new equilibrium quantity? **[7 Marks]**

(c) Discuss the health effects of consumption of illicit brews. **[5 Marks]**

(d) Discuss the costs and benefits implications of legalization of illicit brews? **[5 Marks]**

SECTION C (60%): 108 Minutes

Answer TWO Questions from this Section,

Question 5

(a)

(i) Use Grossman's Human Capital Model to analyze consumer demand for preventive healthcare. **[10 Marks]**

(ii) Discuss any shortcomings of this model? **[5 Marks]**

(b) Data Envelopment Analysis (DEA) has in recent years gained appreciable dominance in assessing hospital efficiency. Both "Output-oriented" and "Input-oriented" models have characterized the approach in the literature. Attempt a separate outline of each of these models and the associated solution and interpretation. **[15 Marks]**

Question 6

The concept of Cost-Effectiveness Analysis (CEA) and Cost Benefit Analysis (CBA) constitute useful instruments in evaluating different health interventions and allocation of health resources.

(a) Compare and Contrast CEA and CBA **[10 Marks]**

(b) When does CEA lead to optimal decision in health care intervention when future costs are ignored? **[15 Marks]**

(c) What problems arise in the use of CEA as an economic evaluation tool? **[5 Marks]**

Question 7

(a) With the aid of a well-labelled diagram, show the welfare loss due to moral hazard of moving from no health insurance to free health care. **[6 Marks]**

(b) On an appropriate diagram show the extent to which market equilibrium annual wages change when employer-provided health insurance (for simplicity entirely paid by the employer) increases by $10,000 per year. Assume labor demand is perfectly wage elastic and labor supply is relatively wage inelastic. Who bears most of the cost of the health insurance – the employer or the worker? **[6 Marks]**

(c) Using an appropriate diagram show the change in well-being when a person facing income of either $50,000 or $100,000 with equal probabilities is instead able to fully insure at the actuarially fair premium. **[6 Marks]**

(d) One of the effects of private health insurance on labor force participation (in the U.S.) has been on the hours worked of prime age workers. In particular some empirical evidence has demonstrated that availability and coverage of health insurance is a key determinant of labor supply decisions of secondary earners in the family.

(i) Provide some of the findings of these studies. **[6 Marks]**

(ii) How are these results applicable to the African context? **[6 Marks]**

Question 8

(a) Discuss the neo-classical welfare economic framework (and its underlying assumptions) in relation to Africa's health systems. **[10 Marks]**

(b) The concept of "Consensus Building" has often been considered as a veritable way for individual citizens and organizations to collaborate in solving complex health care problems.

(i) Under what conditions would consensus building be achieved? **[5 Marks]**

(ii) Discuss criteria for accessing the success of consensus building in terms of its process and outcome? **[10 Marks]**

(iii) What are the benefits of consensus building? **[5 Marks]**