



## AFRICAN ECONOMIC RESEARCH CONSORTIUM

*Collaborative PhD Programme in Economics for Sub-Saharan Africa*

### **COMPREHENSIVE EXAMINATIONS IN CORE AND ELECTIVE FIELDS**

**JANUARY 28 – FEBRUARY 17, 2020**

### **HEALTH ECONOMICS**

**Time: 08:00 – 11:00 GMT**

**Date: Wednesday, February 12, 2020**

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#### **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 either Question 5 or Question 6.

The sections are weighted as indicated on the paper.

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#### **SECTION A: (15%)**

*Answer only ONE Question from this Section*

#### **Question 1**

- (a) What is meant by derived demand in healthcare markets? **(5 Marks)**
- (b) Using economic concepts, briefly document your experience during the last time you visited a healthcare provider. **(5 Marks)**
- (c) Using real-life examples, explain any five domains of quality of healthcare. **(5 Marks)**

#### **Question 2**

- (a) Using a well-labelled diagram, demonstrate the effect of the imposition of user fees on health service utilization. **(7 Marks)**
- (b) Demonstrate the effect of illness or injury on the equilibrium position of a consumer in healthcare markets. **(8 Marks)**



## SECTION B: (25%)

Answer only ONE Question from this Section

### Question 3

- (a) “Neoclassical or orthodox consumer and producer theories can be applied to the analysis of healthcare markets without any adjustment”. Using any five examples, critically examine the validity of this statement. **(15 Marks)**
- (b) Discuss some of the instruments that can be used to minimize moral hazard and adverse selection behaviors in health insurance markets. **(10 Marks)**

### Question 4

- (a) Explain the ways through which health affects household economic welfare. **(10 Marks)**
- (b) Identify and explain any five social determinants of health in your country. **(15 Marks)**

## SECTION C: (60%)

Answer TWO Questions from this Section.

AT LEAST one of which MUST be Either Question 5 or Question 6

Answer Question 5 or Question 6

### Question 5

- (a) Suppose that you have the following parameter estimates of a healthcare demand model:

$$\log Q^d = 1.005 - 0.001 \log P + 0.95 \log Y - 0.25G \quad | \quad (p\text{-values} = 0.000)$$

where:-

- $Q^d$  = number of visits to health facilities per month;  
 $P$  = the user fee (dollars per visit);  
 $Y$  = household income in dollars;  
 $G$  = 1 if service user is a female and zero otherwise.

- (i) Interpret the estimated coefficients, including the constant term. **(6 Marks)**
- (ii) Comment on the claim that healthcare is a luxury good and that user fees have no effect on healthcare utilization. **(4 Marks)**



- (b)
- (i) Using concise examples that may be real-life in a country of your choice, explain any three obligations of patients or the sick in healthcare markets. **(5 Marks)**
  - (ii) Expound on any three obligations of physicians/doctors in caring for their patients or the sick. **(5 Marks)**
  - (iii) By means of a well-labelled diagram, explain the Physician-Induced Demand Hypothesis and outline a procedure for testing it. **(10 Marks)**

### **Question 6**

- (a) Clearly identify and explain as many distinct, and potentially causal, bi-directional relationships as you can, between health, healthcare and economic performance. **(15 Marks)**
- (b) Suggest two policy changes in either the health system or the general economic system, which might simultaneously improve both the health of the population and the performance of the economy. Using the health-macro triangle, trace out the effects of your suggested policy changes around the arrows of the triangle connecting health, healthcare and the economy. **(15 Marks)**

**And**

**Answer Question 7 or Question 8**

### **Question 7**

- (a) Briefly, present Grossman's model of demand for medical care. **(20 Marks)**
- (b) The efficiency-wage hypothesis, in part, posits that *a higher wage can increase workers' food consumption, and thereby cause them to be better nourished and more productive*. Graphically, analyze the effect of a wage reduction on the optimal health stock in the Grossman model. **(5 Marks)**
- (c) Explain any five adjustments to Grossman's model that would make it more realistic. **(5 Marks)**



### **Question 8**

- (a) What are the objectives of Universal Health Coverage? **(5 Marks)**
- (b)
- (i) Highlight some of the unintended consequences associated with performance-based financing in health care in Africa. **(10 Marks)**
- (ii) “Performance-based financing enhances gender equity in health.” Discuss. **(5 Marks)**
- (c) What are the equity and efficiency challenges associated with Out-of-Pocket Payments as a source of health finance? **(10 Marks)**