



**AFRICAN ECONOMIC RESEARCH CONSORTIUM**  
**Collaborative Masters Programme in Economics for Anglophone Africa**  
**(Except Nigeria)**

**JOINT FACILITY FOR ELECTIVES (JFE) 2016**  
**JUNE – SEPTEMBER**

**HEALTH ECONOMICS I**

**First Semester: Final Examination**

**Duration: 3 Hours**

**Date: Wednesday, August 3, 2016**

**INSTRUCTIONS:**

1. This examination is divided into two sections: A and B.
2. **Section A is COMPULSORY.** In addition, you are required to attempt **ANY THREE** questions from **Section B.**
3. Budget your time well i.e. 45 minutes per question.
4. Be clear, precise and concise.

**SECTION A:**

**The Question in this Section is COMPULSORY**

**Question 1**

- (a) Briefly, present the Grossman model of demand for health. (10 marks)
- (b) Highlight any five limitations of the Grossman model of demand for health. (5 marks)
- (c) Explain any five adjustments you can make to the Grossman model of demand for health to reflect the realities of the 21<sup>st</sup> Century. (10 marks)

**SECTION B:**

**Attempt ANY THREE Questions Only from this Section**

**Question 2**

- (a) Briefly, describe any five forms of inefficiencies that characterize referral hospitals in your country. (10 marks)
- (b) With reference to your country, explain any five approaches to improve efficiency or value for money in referral hospitals and/or to address each of the inefficiencies highlighted in (a) above. (15 marks)



### **Question 3**

- (a) Using any two examples for each, from health insurance, distinguish between hidden action and hidden information. **(5 marks)**
- (b) Suggest any two ways of addressing each of the agency problems in (a) above. **(5 marks)**
- (c) Explain briefly any five merits of health insurance in improving financing of and access to health care in your country. **(15 marks)**

### **Question 4**

- (a) Explain any six special attributes of medical care that set it apart from the conventional “goods” considered in economics. **(10 marks)**
- (b) Using examples you are familiar with, explain any ten determinants of the demand for healthcare. **(15 marks)**

### **Question 5**

- (a) Using any three real-life examples from your country, explain what medication errors are? **(7 marks)**
- (b) Explain any five causes of medication errors in your country. **(10 marks)**
- (c) Suggest any five practical strategies to minimize the occurrence of medication errors in your country. **(8 marks)**

### **Question 6**

Sato (2012) has noted that Traditional Medicine (TM) or Complementary and Alternative Medicine (CAM) is popular in sub-Saharan Africa, where over 80 percent have reported its utilization.

With reference to your country and using real-life examples, write an essay highlighting the socio-economic and cultural factors that account for the rising popularity of traditional medicine. **(25 marks)**



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## **JOINT FACILITY FOR ELECTIVES (JFE) 2016**

**JUNE – SEPTEMBER**

### **HEALTH ECONOMICS II**

#### **Second Semester: Final Examination**

**Duration: 3 Hours**

**Date: Tuesday, September 20, 2016**

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#### **INSTRUCTIONS:**

1. This examination has five questions.
  2. You are required to answer **QUESTION 1** and **ANY OTHER THREE** questions.
  3. Each question carries **TWENTY FIVE** marks.
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#### **Question 1: [25 marks]**

You are provided with the following information regarding two interventions that are used for controlling mortalities due to spread of malaria in one village in a rural set-up. The two interventions are preventing the spread of malaria through spraying the breeding sites of mosquitoes with insecticides and providing the residents with insecticide impregnated mosquito nets to cover themselves at night.

#### **Information:**

- (i) The annual program cost for spraying is US \$10,000 while that of net is \$4,000.
  - (ii) The efficacy of treating by use of spraying is 15% while that of by net use is 85%.
  - (iii) The number of treated under spraying is 10,000 persons while that of net is 1,000.
  - (iv) The probability of contracting disease in the village once bitten by the mosquito is 80%.
  - (v) The case fatality rate due malaria illness in the village is 5%.
  - (vi) Average number of life years gained per death averted is given as 40 years.
  - (vii) The case morbidity rate due to malaria is 20%.
  - (viii) Average length of illness episodes is 1 month.
  - (ix) Degree of disability illness is given as 80%.
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- (a) Determine the cost per death averted under each intervention. **(5 marks)**
  - (b) Using the result obtained in (a) above, discuss the implications of your result in terms of cost effectiveness ratio as a full economic evaluation. **(10 marks)**
  - (c) Compute the disability-adjusted life years (DALYs). **(3 marks)**
  - (d) Referring to your result in (a) and (c), discuss the appropriateness of choosing either cost effectiveness analysis or cost utility analysis as an economic evaluation tool. **(7 marks)**



## Question 2: [25 marks]

- Using knowledge of an epidemic scenario like the historical “bubonic plague” or “black death” in Europe, demonstrate and discuss some of its likely effects on the economic growth of a country. **(10 marks)**
- Using a well labelled diagram, demonstrate and explain that increasing the coverage of vaccination will result in a decrease in social marginal benefit and an increase in social marginal cost. **(10 marks)**
- Highlight the problems that are known to confront public provision of quality and timely healthcare services in your country. **(5 marks)**

## Question 3: [25 marks]

- Discuss how aggregate health status of the population is incorporated in the household livelihood security model in the perspective of economic growth and development. **(10 marks)**
- You are provided with the following information that relates to computation of Human Development Index(HDI).Goal post values for the dimension variables are as follows:

Dimension	indicators	min	max
Health	Life expectancy	20	85
Education	Expected years of schooling	0	18
	Mean year of schooling	0	15
Standard of living	Gross national income per capita(2011\$PPP)	100	75,000

In addition you are provided with a hypothetical country X dimension variables of the following; Life expectancy at 80.2, expected years of schooling at 14, mean years of schooling at 11.6, income index at 0.85545

Compute and interpret the value of the HDI for country X and explain why health outcome is considered a key ingredient in the computation of HDI. **(10 marks)**

- World Health Assembly (WHA) Resolution in 2005 called on member countries to pursue universal health systems. Identify and briefly explain the key elements of Universal Health coverage as debated under WHA. **(5 marks)**



#### Question 4: [25 marks]

- (a) Outline and discuss how the six building blocks in health system frame work proposed by the World Health Organization (WHO) integrate to facilitate an efficient and equitable healthcare system of any country. **(10 marks)**
- (b) Given the following statement, state whether you agree or disagree with it and provide motivation for your response.

**“We can draw a general conclusion about the relationship between public or private sector provision of the health services and the goals of efficiency and equity”.**

**(8 marks)**

- (c) You have been provided with the following information about the future health benefit of two health programs i.e., A and B: Program A produces \$300 million worth of health benefits in 10 years' time while program B produces \$250 million worth of health benefits in 5 years' time.

Given three discount rates as 10%, 5% and 3%, conduct a sensitivity analysis and explain which one of the two programs should be selected. **(7 marks)**

#### Question 5: [25 marks]

- (a) Given at least three methods of provider payment mechanism as **salary**, **fee for service** and **capitation** discuss their comparative strengths, their weaknesses and some ways of minimizing their weaknesses. **(15 marks)**
- (b) Discuss how rational epidemic and the prevalence of Elasticity of Demand for Prevention affect the assumption of lowering the spread of a disease. **(10 marks)**