



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

**JOINT FACILITY FOR ELECTIVES (JFE) 2014**

**JUNE – SEPTEMBER**

**HEALTH ECONOMICS I**

**First Semester: Final Examination**

**Duration: 3 Hours**

**Date: Friday, August 1, 2014**

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**INSTRUCTIONS:**

1. Attempt a total of **FOUR (4)** questions.
  2. Section B is **COMPULSORY**.
  3. Budget your time well i.e. 45 minutes per question.
  4. Be clear, precise and concise.
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**SECTION A:**

**Attempt THREE (3) QUESTIONS Only from this Section**

**Question 1**

- (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 the above statement. **(15 marks)**
- (b) By means of a clear and well-explained illustration, demonstrate the effect of the removal of user fees for healthcare services in public health facilities in your country. **(5 marks)**
- (c) Using a clear and well-explained illustration, demonstrate the effect of illness on the equilibrium position of a consumer. **(5 marks)**

**Question 2**

- (a) Suppose that your wealth increases to £20,000. You understand, however, that if you become ill, which may occur with probability 0.06, your medical expenses will cause your wealth to decline to £10,000. If the utility of £20,000 is 200 utils and the utility of £10,000 is 140 utils. Compute your expected wealth and expected utility. **(6 marks)**
- (b) Explain briefly any five merits of social health insurance in improving financing of and access to healthcare in your country. **(13 marks)**
- (c) Distinguish between *ex ante* moral hazard and *ex post* moral hazard with regard to health insurance using real-life examples from your country. **(6 marks)**



### Question 3

- (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)**

### Question 4

- (a) Describe any three problems which arise when defining and measuring the output of a hospital? **(5 marks)**
- (b) Suggest practical strategies to solve each of the problems in Question 4(a) above? **(5 marks)**
- (c) Compare the pros and cons of the Parametric Approach and Nonparametric Data Envelopment Analysis (DEA) methods of measuring hospital efficiency. **(15 marks)**

### Question 5

- (a) Briefly, document your experience during the last time you visited a healthcare provider. **(8 marks)**
- (b) Explain any three attributes of the quality of care you envisaged in Question 5(a) above. **(6 marks)**
- (c) Explain any five common factors across successful healthcare organisations. **(5 marks)**
- (d) Using real-life examples, explain any five domains of quality of healthcare. **(6 marks)**

## **SECTION B: COMPULSORY**

### Question 6

- (a) Using examples, clearly explain your country's healthcare delivery system. **(8 marks)**
- (b) Highlight any five challenges that characterize your country's healthcare delivery system. **(10 marks)**
- (c) Suggest any five practical strategies to address the challenges highlighted in Question 6(b) above. **(7 marks)**



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**JUNE – SEPTEMBER**

**HEALTH ECONOMICS II**

**Second Semester: Final Examination**

**Duration: 3 Hours**

**Date: Friday, September 19, 2014**

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**INSTRUCTIONS:**

1. Answer **QUESTION 1** and **ANY OTHER THREE** questions.
  2. You are required to answer **FOUR** questions in total.
  3. Note that **QUESTION 1** is **COMPULSORY**.
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**Question 1 (Compulsory)**

Below is a Health Production function for Sub-Saharan African countries. The primary focus of the study was on the provision of health care services as a determinant of life expectancy in the 31 countries that make Sub-Saharan Africa.

<u>Explanatory Variables</u>	<u>Elasticity</u>	<u>Se</u>
Constant	3.330***	(0.364)
GDP per capita	0.048**	(0.025)
Food availability	0.138***	(0.050)
Health care expenditure	-0.095***	(0.027)
Literacy rate	-0.003**	(0.001)
Adult alcohol consumption	-0.020	(0.012)
Population	-0.008	(0.014)
Urbanization	0.001	(0.002)
CO2 Emission per capita	0.000	(0.001)

**\*\***, **\*\*\*** significant at the 10 and 5 percent level respectively

Source: Fayissa and Gutema (2005)

Note: The dependent variable is life expectancy at birth. It indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.

Health Expenditure represents both public and private expenditure

Literacy rate represents life style and social factors

GDP per capita represents economic factors

CO2 per capita represents environmental factors, urbanization and congestion



- (a) Interpret the above results and advice African Countries on what could be done to improve life expectancy in the continent. **(16 marks)**
- (b) Cutler, Deaton and Lleras-Murey (2006) attributed longevity gain among the developed countries over a long-time to knowledge, Science and technological development in medicine.
- (i) Explain the above statement. **(6 marks)**
- (ii) How can technological advancement in medicine be measured? **(6 marks)**
- (c) Both developed and underdeveloped countries of the world today display relatively high level of communicable and non-communicable diseases against their health history.
- Justify this new trend especially for Africa. **(12 marks)**

## Question 2

- (a) Briefly discuss the major steps in public health policy making. **(10 marks)**
- (b) What are the basic need strategies to maximize health system objectives? **(6 marks)**
- (c) How is health system different from health policy? **(4 marks)**

## Question 3

National Health Account (NHA) is an essential input for strengthening health system performance.

- (a) Discuss the five questions that NHA addresses. **(8 marks)**
- (b) What are some of the benefits of NHA to your country's health system? **(6 marks)**
- (c) NHA cannot address all the questions relating to the objectives of health systems. With reference to your country, give reasons to validate this statement. **(6 marks)**

## Question 4

- (a) Differentiate between the traditional indemnity insurance and Managed Care Organizations. **(8 marks)**
- (b) Discuss context factors and how they affect policy making process in the health sector. **(6 marks)**
- (c) Explain the conditions under which performance evaluation can be a very important tool in policy making process. **(6 marks)**



### **Question 5**

- (a) Discuss the coverage of health sector reform. **(5 marks)**
- (b) List five ways in which financial reform can be undertaken. **(5 marks)**
- (c) Discuss five factors that may influence health sector reform in your country. **(10 marks)**

### **Question 6**

- (a) Consider a condition affecting 100 patients that can be treated by mutually exclusive health care interventions A, B, C. Intervention A costs KSh 300,000 and increases life duration of patient by 0.3 years or 30 years gained. Intervention B costs KSh 500,000 and yields additional 40 years, while intervention C costs KSh 600,000 and yields additional 50 years.
  - (i) Calculate the ACER for interventions A, B and C. **(3 marks)**
  - (ii) Calculate the ICER of B in relation to A, and ICER of C in relation to A. **(3 marks)**
  - (iii) Which of the interventions would you recommend as being cost effective? **(3 marks)**
- (b) What are the limitations of Cost Effectiveness Analysis? **(6 marks)**
- (c) List five circumstances under which Cost Benefit Analysis (CBA) can be most useful. **(5 marks)**