AFRICAN ECONOMIC RESEARCH CONSORTIUM

Collaborative Masters Programme in Economics for Anglophone Africa (Except Nigeria)

JOINT FACILITY FOR ELECTIVES (JFE) 2017
JUNE – SEPTEMBER

HEALTH ECONOMICS II

Second Semester: Final Examination

Duration: 3 Hours   **Date: Monday, September 18, 2017**

INSTRUCTIONS:

1. This examination is divided into three parts: **Section A**, **Section B** and **Section C**.

2. You are required to answer **FOUR QUESTIONS IN ALL**, with **AT LEAST ONE QUESTION** from **EACH SECTION**.

3. All questions carry twenty five (25) marks each.

Section A:

Answer AT LEAST ONE QUESTION from this Section

Question 1

Epidemiological studies describe the distribution of health outcomes in terms of frequency and pattern.

(a) Explain the key terms in the above statement and justify the need for epidemiological information by health economists.   **(12 marks)**

(b) Assume you are to conduct a descriptive epidemiological study, briefly discuss the procedure to follow.   **(10 marks)**

(c) Assume you conducted a field study using 7000 sample size, 6870 individual completed the questionnaire, of which 610 suffered diabetes and hypertension at the particular point in time. Calculate the prevalence rate and report in 1000. **(3 marks)**

Question 2

(a) Discuss the key features of the Incidence and Prevalence approaches to evaluation.
                                                                          (14 marks)

(b) Justify the marriage between epidemiology and economics that gave birth to economic-epidemiology.   **(6 marks)**

(c) List five of the major tasks of an epidemiologist.   **(5 marks)**

Section B:

Answer AT LEAST ONE QUESTION from this Section

Question 3

(a) Vaccinations would be administered to 100,000 persons aged 65 years and older over the next year by public health nurses in Nigeria. Information revealed that similar vaccinations cost $3 apiece (medication, marginal labour costs, etc.). The inoculations are expected to prevent 1,000 cases of influenza this year and to result in 50 adverse reactions requiring treatment. The average cost of treatment for influenza is $50 and for adverse effect reaction, it is $300. The discount rate converting money and health effects to present value is 5%. It is estimated that 10 people will not die of influenza this year as a result of this program. They will live for eight (all healthy) years. Persons who avoid influenza as a result of the program experience an increase in the quality of their life of 0.04 of healthy year. (They would have felt miserable with the illness, but it would not have lasted long). The 50 persons suffering adverse reactions have their life quality lowered by 0.09 for the next year.

Calculate the effectiveness of the program and advice the government of Nigeria.

(15 marks)

(b) Assigning money to health outcomes by Cost Benefit Analysis (CBA) has generated argument and counter argument between Welfarist and Extra-welfarist. Present the argument and take a position as a health economist. **(10 marks)**

Question 4

(a) Randomized Control Trials (RCTs) may be an effective method of data collection for clinical researches, but its application to economic research is marred with serious limitations. Discuss these limitations and proffer solution to make it applicable to health economics research. **(15 marks)**

(b) A condition affecting 50 patients that can be treated by three mutually exclusive health care interventions A, B, and C. Intervention A costs £300,000 and increase life duration per patient by 0.3 years or 30 life years gained. Intervention B costs £500,000 and increased life by 0.4 or 40 life years gained while intervention C cost £600,000 and increased life by 0.5 or 50 years life gained. Assume that the budget for the intervention treatment of 100 patients is $330,000. Which intervention would you recommend and why? **(10 marks)**

Section C:

Answer AT LEAST ONE QUESTION from this Section

Question 5

The objectives of a health system include effectiveness, efficiency, equity and quality. However, in most African countries, the attainment of these objectives has been minimal.

(a) Explain these objectives and give reasons for the failure.   **(15 Marks)**

(b) Why would you think that national health accounts may not be enough to resolve problems of fairness, equity and efficiency in the health system?   **(10 marks)**

Question 6

(a) World Health Report, 2013 predicted that by 2030, 70% of the global burden and 80% deaths due to NCDs will be borne by the developing countries. What are the factors that may justify this prediction?   **(10 marks)**

(b) What were the reasons for Performance Based Finance and how are the agents remunerated?   **(15 marks)**