

UNIVERSITY OF COLOMBO

FACULTY OF ARTS

FOURTH YEAR EXAMINATION IN ARTS (ECONOMICS) -2016/ 2017

END OF THE SECOND SEMESTER

**ECN 4292: Health Economics**

Time: 2 Hours

Answer any four questions

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1.
  - (a) Briefly present the rationale behind Grossman's model of optimal choice of investing in health.  
(5 Marks)
  - (b) Briefly explain, using a diagram how Grossman uses the Marginal Efficiency of Capital concept to determine the optimal demand for health capital ( $H^*$ )  
(5 Marks)
  - (c) An individual X, grows older, and his productivity decreases resulting in lower wages. Discuss how these occurrences affect this individual's health stock, according to the Grossman model.  
(5 Marks)
  - (d) Private hospitals in Sri Lanka face an oligopoly market. What impact does such a market structure have on patients?  
(6 Marks)
  - (e) Explain, using examples from the healthcare sector, three options for reducing unit costs.  
(4 Marks)
2.
  - (a) Explain the following pairs of concepts, using examples where necessary to highlight their differences
    - (i) Perfect Agency relationship versus Supplier Induced demand
    - (ii) Moral Hazard versus Adverse Selection  
(5 Marks per section)
  - (b) Discuss the supplying of immunization and its pricing in relation to externalities.  
(5 Marks)
  - (c) Explain the impacts of a commodity tax on user and producer welfare, highlighting that such taxation also leads to deadweight loss.  
(5 Marks)
  - (d) The consultant market is thought to be oligopolistic, with a set wage. How do these characteristics affect the patients? Draw the relevant diagram and explain.  
(5 Marks)

3. (a) Briefly explain the different steps involved in Step-down cost accounting in the context of a hospital. (8 Marks)

- (b) Imagine that you have been asked to estimate the system cost per dengue patient, assuming that the government hospital has a ward with 20 beds for medical patients

taking up half a floor in a three floor building, built many years ago, of which 8 beds are utilized for dengue patients currently.

What challenges would you face in estimating

- (i) Building cost for the particular ward
  - (ii) Staff costs on the particular ward
  - (iii) Electricity costs of the particular ward
- and how would you overcome these challenges?

(12 Marks)

- (c) Under the scenario building technique, what is meant by the term 'indirect costs'? What are the difficulties faced in capturing a household's indirect costs arising due to a hospitalization?

(5 Marks)

4. (a) Consider the following information

Programme	Cost	Life years gained	Benefit from life years gained (Rs)
Programme A	200,000	250	400,000
Programme B	300,000	300	400,000
Programme C	300,000	400	450,000
Programme D	250,000	200	200,000

- (i) Calculate the Average cost effectiveness ratio for each programme, and choose the best programme.

(5 Marks)

- (ii) Calculate the Incremental cost effectiveness ratio for the best two programmes chosen using the above criteria.

(5 Marks)

- (iii) What other information would you need to make a decision on whether to implement one of these two programmes?

(4 Marks)

- (iv) Using the net benefit concept of Cost Benefit analysis, choose the best program.

(5 Marks)

- (b) Immunization has prevented polio. What types of economic benefits are

generated by this intervention?

(6 Marks)

5. (a) Briefly explain the importance of prepayment and risk pooling in the context of health financing. (5 Marks)
- (b) Analyze the current health financing situation in Sri Lanka, highlighting the major problems that the country faces with regard to health financing. (10 Marks)
- (c) Social health insurance has many advantages, but is not the appropriate financing strategy for Sri Lanka at the moment. Discuss. (10 Marks)
6. (a) Discuss in what ways health can affect poverty in an economy? (8 Marks)
- (b) Why are Non Communicable Diseases (NCDs) a major economic problem? (8 Marks)
- (c) What are the basic requirements for a sound primary healthcare system in the country? (9 Marks)
7. Write short notes on any four (4) of the following topics:
- (a) Estimating the value of life using the scenario building method
  - (b) Quality Adjusted life years (QALY)
  - (c) Disability Adjusted life years (DALY) in Sri Lanka
  - (d) Secondary and tertiary prevention
  - (e) National Policy on Tobacco and Alcohol
  - (f) Factors that have improved the health of mankind
  - (g) Problems faced by health insurance companies
- (6.25 Marks per section)

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