

**UNIVERSITY OF RUHUNA**  
**BACHELOR OF SCIENCE IN FISHERIES AND MARINE SCIENCES**  
**Level III, Semester I – August 2017**

**FAQ 3113 – Basic Economics for Aquaculture and Fisheries**

**Answer any four (04) questions**

Time: 02 Hours

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1. (a) Briefly explain the factors affecting the demand of a commodity in the market.  
(06 Marks)
- (b) Briefly explain the process of determination of equilibrium price for a commodity in the market.  
(07 Marks)
- (c) Explain the possible impacts of imposing a maximum price for a commodity by the government.  
(12 Marks)
  
2. (a) Briefly discuss the reasons for developing a monopolistic market for a commodity.  
(10 Marks)
- (b) Using appropriate diagrams explain the price determination process of a commodity in monopolistic market.  
(15 Marks)
  
3. (a) Briefly explain the concepts of 'variable cost', 'fixed cost' and 'marginal cost'.  
(06 Marks)
- (b) Show that the marginal cost equals to the average cost at the lowest level of the average cost.  
(09 Marks)
- (c) Explain the concepts of 'user cost'.  
(10 Marks)
  
4. (a) Giving examples, distinguish the renewable and non-renewable economic resources which can be extracted from coastal and marine ecosystems.  
(10 Marks)
- (b) Using appropriate diagrams explain the price determination process of a commodity in a perfect competitive market.  
(15 Marks)

5. (a) Briefly discuss the factors influencing the rate of extraction of non-renewable resources. (10 Marks)
- (b) A person plans to extract a deposit of 10,000 tons of mineral resource in his private land within two years. Extraction costs at the first year and second year are estimated as  $C_1 = q^2$  and  $C_2 = 2q^2$  respectively where C is the total cost of extraction and q is the quantity extracted. The market price of the resources extracted is Rs. 2000 per ton. Neglecting the interest rate find the amounts to be extracted in each year in order to maximize the profit. (10 Marks)
- (c) If the expected price in the second year is Rs. 3000 per ton, what will be the amounts of extraction in each year. (05 Marks)
6. (a) Briefly discuss the possible reasons for depletion of fish stock in open access reservoirs. (08 Marks)
- (b) Briefly explain concepts of 'Natural Equilibrium', 'Maximum Sustainable Yield', 'Maximum Economic Yield' and the 'Resource Rent' using appropriate diagrams. (12 Marks)
- (c) Discuss the difficulties in managing the fish stock at profit maximizing level. (05 Marks)
7. (a) Briefly discuss the difficulties of research in social science compared to the natural sciences (08 Marks)
- (b) What are the different methods which can be used for collection of data in social science research. (05 Marks)
- (c) Briefly explain two of following sampling methods which can be used to select representative samples for social science research studies in fishing communities and discuss the merits and demerits. (i) Simple Random Sampling (ii) PPS Sampling (iii) Cluster Sampling (iv) Snow-ball sampling. (12 Marks)

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