

University of Ruhuna
Bachelor of Science in Fisheries and Marine Sciences Degree Examination
Level III Semester I – August 2018

FAQ 3113 – Basic Economics for Aquaculture and Fisheries

Time: 02 Hours

Answer any four (04) questions

1. (a) What are the properties of indifferent curves?
(05 Marks)
- (b) Graphically derive ‘Constant expenditure demand function (Marshallian)’ and ‘Constant utility demand function (Hicksian)’ using indifferent curves and discuss the difference.
(10 Marks)
- (c) Explain ‘the substitution effect’ and ‘the income effect’ of changes of prices of a commodity.
(10 Marks)
2. (a) Explain the concepts of natural equilibrium, maximum biological yield, maximum economic yield and maximum sustainable yield of harvesting renewable biological resources.
(15 Marks)
- (b) Explain the reasons for not achieving the economic rent of resources in the fisheries sector in Sri Lanka.
(10 Marks)
3. (a) What are the factors that determine the supply of agricultural products?
(05 Marks)
- (b) Prove that at the level of profit maximizing of a firm, the marginal cost (MC) equal to the marginal revenue.
(05 Marks)
- (c) Total cost function of a firm is $TC = 50 + 6q^2$ and the demand function is $P = 100 - 4q$. Find the profit maximization output level of the firm.
(05 Marks)
- (d) What is the price of the product in part (c)?
(05 Marks)

- (e) Calculate the price elasticity of demand at the above price and comment about the elasticity.
(05 Marks)
4. (a) Explain the reasons for developing a monopoly for a product.
(05 Marks)
- (b) Cost function of a product of a monopolist is $C = 50 + 4Q$ and the market demand function for the product is $Q = 50 - 0.5 P$. Find the profit maximizing output level of the monopolist.
(10 Marks)
- (c) Sketch the Demand function, MR function, MC function of the above monopolist.
(05 Marks)
- (d) What is the price of the above product?
(05 Marks)
5. (a) What are the factors influencing the rate of extraction of non-renewable natural resources?
(10 Marks)
- (b) Develop a bio-economic model to explain the amount of extraction of natural resources considering the criteria of the price, cost of extraction and market interest rate.
(15 Marks)
6. (a) Explain market price of a product in the perfect competitive market, profit maximizing output level of a firm, long run equilibrium level of a firm and the shutdown point of a firm in a perfect competitive market, using appropriate diagrams.
(10 Marks)
- (b) Explain the profit maximizing output level of a product in zero cost monopoly, using appropriate diagrams.
(10 Marks)
- (c) If the above product is in perfect competitive market what will be the output level?
(05 Marks)