

22/01/2020

Moderated
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KENYATTA UNIVERSITY
SCHOOL OF ECONOMICS
DEPARTMENT OF APPLIED ECONOMICS
EAE 408: ECONOMICS OF INDUSTRY
SEMESTER II 2019/2020

DATE:

TIME: 2 Hours

INSTRUCTIONS

- 1) Answer question one and any other two questions
- 2) Question one is compulsory and carries 30 marks
- 3) All other questions carry 20 marks each

Question One

- a) The possibility of price discrimination is linked to possibility of arbitrage. Briefly describe the various types of arbitrage **(6 Marks)**
- b) List the different types of oligopolists **(2 Marks)**
- c) Explain the difference between heterogenous and differentiated products **(4 Marks)**
- d) A market can be subdivided into separate segments each of which can be considered to be a separate market in its own. Briefly discuss the various market segments **(6 Marks)**
- e) Differentiate between technical and economic efficiency **(2 Marks)**
- f) Assume you are given the following market demand curve: Market Demand: $P = 24 - 4Q$. Suppose there are 200 competitive firms in the market and they are identical (that is, they have the same cost function). The marginal cost function of a representative firm is $MC = 400Q$. Market supply curve is found by horizontally summing the individual MC curves and hence Market Supply is given by $P = 4Q$.

Required

- i. What would be the equilibrium price and quantity if the market were purely competitive? **(2marks)**

- ii. Suppose that a single company buys all 200 firms and becomes a monopoly in this market. The technology does not change but only does the ownership. What is the profit-maximizing output and price for the monopoly? **(2 marks)**
- iii. Using illustration mark the equilibrium price and quantity for the purely competitive market, and the profit-maximizing output and price for a single-price monopoly. What is your conclusion from this comparison? **(3 marks)**
- iv. You can imagine that there is a welfare loss due to the monopolization. Compute the deadweight loss using algebraic notation **(3 marks)**

Question Two

- a) Explain the following terms as used in diversification approach to measurement of market structure
 - i. Counting
 - ii. Government Index
 - iii. Berry's Index **(3 Marks)**
- b) Let the total market supply for the product be specified as Q units and let the demand function be: $P = F(Q) = F(Q_1 + Q_2 + \dots + Q_i + \dots + Q_n)$

Where P is product price, Q_i is output of the i -th firm.

- i. Give the expression of revenue for firm i **(2 Marks)**
- ii. Assume a uniform price for the industry which changes if output of any big firm changes. Also define the market quantity elasticity of demand (e_q) as the percentage change in market price with a marginal percent change in the market quantity supplied. Derive the Hirshman-Herfindal index of concentration. **(10 Marks)**
- iii. How will you decide which industry is more concentrated than the other? **(5 Marks)**

Question Three

a) Over the years, Kenya's manufacturing sector has experienced declining productivity. As an expert in industry economics, the cabinet Secretary for State Department for Industry has asked you to probe efficiency levels among some of Kenya's manufacturing firms.

i. Using ^agraphical approach~~es~~ explain clearly two approaches that you would take
(10 Marks)

ii. What is the weakness of using these two approaches (2 Marks)

b) Briefly discuss the following theories of the firm

i. Neo-classical theory of the firm (4 Marks)

ii. Property theory of the firm (4 Marks)

Question Four

Suppose that you are the manager of an opera house. You have a constant marginal cost of production equal to Kshs.50 (i.e. each additional person in the theatre raises your costs by Kshs.50 – we will ignore any fixed costs for now.) You have estimated your demand curve for tickets as follows: $Q=150-P$

i. Calculate your profit maximizing ticket price (3 Marks)

ii. Suppose that you re-estimated your demand curve, but this time, you included a dummy variable for gender:

$$Q = 175 - P - 50 - D$$

$$D = \begin{cases} 1, & \text{If consumer is male} \\ 0, & \text{if consumer is female} \end{cases}$$

Given your new information, calculate your profit maximizing price assuming that you can't distinguish between male and female customers (i.e. your tickets are sold online) (6 Marks)

iii. Calculate the prices you would charge if you could distinguish between male and female consumers (i.e. ticket purchasers show up to the box office to buy tickets.)

Why might you be concerned about secondary markets forming for your product?
(5 Marks)

- iv. Define merger and explain different types of mergers that exist in your country
(6 Marks)

Question Five

Kenya is leading Africa in internet penetration with over 30 million Kenyans having access to the internet. A report by Jumia Business Intelligence and GSMA shows that in 2017, 67 per cent of the population in Kenya was classified as internet users. Financial institutions and telecoms in the country have taken advantage of this high level of internet penetration in doing business. This has encouraged many businesses to engage in dissimilar economic activities. Giving relevant examples from the Kenyan economy, give a justification why businesses would engage in dissimilar economic activities and processes that it must significantly change to achieve its objectives (20 Marks).