KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2018/2019

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF ECOMOMICS

EAE 408: ECONOMICS OF INDUSTRY

DATE: Tuesday, 26th March, 2019 **TIME: 8.00a.m. - 10.00a.m.**

INSTRUCTIONS:

Answer Question One and any other Two questions

Question One

a) The table below shows eight firms with their actual sales.

Firm	Actual Sales in Millions (X*i*)	Market share for firm *i* in percentage
1	2	
2	4	
3	8	
4	1	
5	5	
6	6	
7	10	
8	12	

Required:

i) Determine the market share for each firm in percentage **(5 Marks)**

ii) Assume firms 3, 5, 6 merge to be one, find the concentration ration **(4 Marks)**

b) Kenyatta University has contracted Hakim Construction Limited to supply construction materials for the Kenyatta University Teaching and Referral Hospital currently under construction next to the School of Economics. Hakim Construction has been ferrying the construction materials using the same route used by students while going for their lectures at the school. The Lorries have been causing heavy dust pollution that has been affecting student's health. As a result students have been incurring extra medical expenses. Suppose that the pollution cost to students is estimated at Ksh 2,000 per each lorry load ferried. Further you are provided with the following cost per lorry load by Hakim construction

Number of Lorry Loads	**1**	**2**	**3**	**4**	**5**
Cost to Hakim (Kshs)	**4,000**	**5,000**	**7,000**	**10,000**	**15,000**

Required

i) Using the above information calculate the Social Cost (2marks)

ii) If the revenue to Hakim Construction from a lorry load is ksh 3000. What is the optimal number of lorry loads should they transport? (4 Marks)

iii) If Hakim Construction is forced to internalize the pollution damage, how many lorry loads will they transport? (4 marks)

iv) Suppose students offer to pay Hakim Construction Ksh 8,000 to stop transporting the materials and Ksh 500 for every lorry transported. How many Lorries should be transported? (4 marks)

c) Consider a new industry. Firm 1 can choose one of two technologies. Technology A requires a fixed F_A and can produce at a cost of C_A per unit. The cost with technology B are F_B and C_B. After firm 1 has chosen its technology, firm 2 can consider entering. It has only one technology choice, with cost F_2 and C_2.

Required.

d) Why might the magnitude of F2 determine which technology firm 1 chooses? (2 marks)

e) Might firm 1 adopt a different technology if it were not facing entry? Why or why not? (2 marks)

f) Describe the various strategic ways firm 1 can deter firm 2 from entry. (3 marks)

Question Two

a) Global motors sell its auto mobiles in both the United States and Japan. Due to trade restrictions, a vehicle sold in one country cannot be resold in the other. The demand functions of the two countries are

$$US: P = 30,000 - 0.40Q$$

$$JAPAN: P = 20,000 - 0.20Q$$

The firms total cost function is $TC = 10{,}000{,}000 + 12{,}000Q$. What price should Global charge in each country in order to maximize profit? What will be the total profit? (10 marks)

b) Using graphical analysis explain the inefficiency of the monopoly. (10marks)

Question Three

a) Discuss the following theories

i) Neoclassical Theory of the Firm (5 marks)

ii) The Transaction Cost Theory of the Firm. (5 marks)

b) The demand function of for a monopolist is given by P=50-2Q and the marginal cost is \$10;

Required

i) Compute the deadweight loss related associated with monopoly pricing. (4 marks)

ii) If P= 50-4Q, what is the dead weight loss. (3 marks)

iii) Based on your answers to (i) and (ii), how is the dead weight loss related to the slope of the demand curve. (2 marks)

Question Four

a) Consider an industry consisting of three firms with equal demand and cost functions given as;

$$C(q_i) = 5 + 2q_i$$

$$P(Q) = 18 - Q \qquad \text{where } Q = q_1 + q_2 + q_3$$

The firms produces and supply their output simultaneously. What will be the equilibrium values of q_1, q_2 and q_3? (10 marks)

b) Hannah and Kay (1967) offer general conditions or requirements which should be satisfied by indexes if proper conclusions are to be arrived at. Clearly explain these requirements giving examples (10 marks)

Question Five

a) Firms in monopolistic market structures normally incur advertising costs to market their slightly differentiated products and to inculcate brand loyalty among their clients. Explain the reasons for this kind of behavior (10 marks)

b) Explain Five reasons why it is important for a firm to define its market (10 Marks)