CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATIONS
RESIT/SPECIAL EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF

ECON 313: ADVANCED MICROECONOMICS

STREAMS: **TIME: 2 HOURS**

DAY/DATE: WEDNESDAY 12/09/2018   **2.30 P.M – 4.30 P.M**

INSTRUCTION:

- **Answer question one and any other two questions**
- **Do not write on the question paper**

1.   (a) Distinguish between the following terms:

   (i) Compensated and uncompensated demands

   (ii) Bertrade and cournot model   [4marks]

   (b) Explain the properties of a cost function.   [10marks]

   (c) The convexity condition of indifference curve a unique solution (interior solution) for the consumer. However, there exist some special cases where interior solution is not possible. Describe these cases.   [6marks]

   (d) Prove that the marginal cost curve of a perfect competitive firm cuts the average cost curve from below at its minimum point.   [5marks]

   (e) Using a Cobb-Douglas production function of your choice, calculate the elasticity of substitution of a Cobb-Douglas production function.   [5marks]

2.   (a) Consider a market with three oligopoly firms. Suppose that the market demand curve is given by P= a-Q, where Q = q_1 + q_2 + q_3 . Supposed there is a constant

marginal cost of   c. Suppose these firms choose quantities as follows: first firm 1 chooses

q^1 . Then firms 2 and 3 observe q1 and then simultaneously choose q^2 and q^3 respectively. Calculate the equilibrium quantities, price and profits. [10marks]

(b) With aid of diagram explain how pareto efficient allocation is achieved= in a trade between two individuals and two goods. [10marks]

3. (a) Consider the following indirect utility function. [3 marks]

$$V(p,m) = p_1^{\frac{1}{2}} \quad p_2^{\frac{1}{2}} \quad m$$

Where P_1 and P_2 are the prices of the two goods X_1 and X_2 respectively and m is the consumer income. Calculate the uncompensated demand functions and compensated demand function. Test whether they are legitimate. [20 marks]

4. (a) You are given the following information for a certain firm Q = KL^2 ; r =10 and w =15.

Required :

(i) Calculate the units of labour (L) and capital (K) that minimizes cost.
(ii) Calculate the minimum cost [10marks]
(b) State, derive and explain the lerner index of market power. [10marks]