CENTRAL UNIVERSITY

FACULTY OF ARTS AND SOCIAL SCIENCES
DEPARTMENT OF ECONOMICS AND DEVELOPMENT STUDIES

END OF FIRST SEMESTER EXAMINATION – 2022/2023

ECON 201: PRINCIPLES OF ECONOMICS I

LEVEL 200

MORNING

FEBRUARY 2023

DURATION 3 HOURS

STUDENT ID No..

INSTRUCTIONS:

(i)   Answer ALL from section A and THREE (3) Questions from Section B

(ii)   All Answers must be provided on the Answer Sheet

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Name of Lecturer/Instructor: MR. KOFI KORLE

SECTION A: Answer ALL questions [*40 marks*]

Explain the **underlined words** and determine whether each sentence is **True** or **False**. Precise explanation attracts *2 marks* and correct determination of True/False attracts *2 marks*.

1. Consumer **preferences** denote the interest exhibited by a good or service.   [*4 marks*]

2. A **price floor** is usually fixed to protect the welfare of employers.   [*4 marks*]

3. **Economies of scale** and economies of scope are long run concepts.   [*4 marks*]

4. The Engel and **Cournot aggregation** conditions are unique properties of demand.

   [*4 marks*]

5. The **substitution and income effects** of a price change is negative for an inferior good.

   [*4 marks*]

6. An **indifference curve** is a combination of commodity bundles that gives the same level of output.   [*4 marks*]

7. The **law of variable proportions** is strictly a short run phenomenon.   [*4 marks*]

8. **Microeconomics** is the analyses of decisions made by individual economic agents and how regulations shape such decision making.   [*4 marks*]

9. Wage negotiations by a **Trade Union** will be favourable if demand for the services provided by the union is elastic.   [*4 marks*]

10. The **total revenue** test for a profit maximizing firm follows that when demand is elastic, price should be increased.   [*4 marks*]

SECTION B: Answer THREE questions [*60 marks*]

1. Assume price of good X is GH¢2 and income Y = GH¢100. Quantity of X bought is 20 units while that of Z is 25 units. As income increases to GH¢150, quantities of X and Z increase to 30 and 40 units, respectively.

   i.   Calculate income elasticities of demand for goods X and Z. [*8 marks*]

   ii.   Interpret the coefficients of income elasticity obtained for X and Z. [*4 marks*]

   iii. Given that the Engel aggregation condition holds, calculate the budget share of good Z. [*8 marks*]

2. The demand curve of a product selling at GH¢20 is $P = 40 - 2Q$. Firms producing the product expect the introduction of a new sophisticated technique to increase production volumes, but with rising average cost. They are contemplating whether to increase the price and adopt the use of the new technique.

   i.   Calculate the point price elasticity of demand of the product. [*8 marks*]

   ii.   What recommendation on pricing policy would you provide to the firms. [*2 marks*]

   iii. Explain any three determinants of price elasticity of demand. [*10 marks*]

3. (a) With the aid of a diagram, analyse substitution and income effects of a fall in price of a household refrigerator. [*15 marks*]

   (b) A monopolist has a demand curve $Q = 100 - P$ and a total cost curve $TC = 16 + Q^2$.
   Find the monopolist's equilibrium price and quantity.   [*5 marks*]

4. A firm's total cost function is given by the equation: $TC = 250 + 5Q + 10Q^2$. Use the information to answer questions below.

   (a) Find the following:

      i.   Total fixed cost.   [*2 marks*]
      ii. Total variable cost.   [*3 marks*]
      iii. Average cost.   [*3 marks*]
      iv. Average variable cost   [*3 marks*]
      v.   Marginal cost.   [*3 marks*]

   (b) Determine the quantity that minimizes average cost.   [*6 marks*]