



ATD LEVEL III

PILOT PAPER

PRINCIPLES OF ECONOMICS

DECEMBER 2021.

Time Allowed: 3 hours.

Answer any FIVE questions.

ALL questions carry equal marks.

QUESTION ONE

- (a) Explain the concept of “Scarcity, Choice and Opportunity cost as applied in economics. (3 marks)
  - (b) State and briefly explain four main factors that may cause a fall in the supply of a good in the market. (4 marks)
  - (c) Highlight the causes of increased cost of living in developing countries. (5 marks)
  - (d) With the aid of a well-labeled diagrams, distinguish between the effects of price floors and price ceilings. (8 marks)
- (Total: 20 marks)**

QUESTION TWO

- (a) The data below represents the units consumed of a commodity at different income levels and price in the market:

Quantity (Units)	Income (Sh.)	Price (Sh.)
100	5000	16
120	6000	16

Required

- (i) Compute income elasticity of demand through the arc elasticity method. (2 marks)
  - (ii) Discuss the applications of the concept of elasticity in business and economic policy decisions making. (6 marks)
- (b) The following information relates to a firm in a certain market. A monopolist sells its output in two distinct markets with each market completely sealed off from each other.

The demand for the firms output in each market is given by the following equations:

$$P_1 = 52 - 5Q_1$$

$$P_2 = 72 - 6Q_2$$

The total cost function of the firm is given by the following function:

$$TC = 50 + 12Q$$

Required:

- (i) The firms’ profit maximising level of output. (6 marks)
- (ii) Determine the corresponding prices. (2 marks)
- (iii) Outline the advantages of Price Discrimination. (4 marks)

QUESTION THREE

- (a) (i) Define an indifference curve. (2 marks)
- (ii) Explain four applications of the indifference curve analysis. (8 marks)

- (b) With the aid of a well labelled diagram distinguish between income and substitution effects of a price change.
- (i) Case of a normal good. (5 marks)
  - (ii) Case of an inferior good. (5 marks)
- (Total: 20 marks)**

**QUESTION FOUR**

- (a) (i) Explain the law of variable proportions. (2 marks)
- (ii) Discuss the key assumptions to the law of variable proportions. (6 marks)
- (b) With the aid of relevant diagrams demonstrate the short run equilibrium for a firm under perfect condition. (12 marks)
- (Total: 20 marks)**

**QUESTION FIVE**

- (a) (i) Explain the concept of credit creation by commercial banks. (2 marks)
- (ii) Highlight the factors that limit the credit creation process by commercial banks. (6 marks)
- (b) Explain the difference between “transfer earnings” and “economic rent” of a factor of production. (2 marks)
- (c) Highlight some of the economic implications of a rising trend in the rural-urban migration and the possible remedy measures. (8 marks)
- (Total: 20 marks)**

**QUESTION SIX**

- (a) The total cost equation in the production of bacon at some hypothetical factory is:  $C = 1000 + 100Q - 15Q^2 + Q^3$ .
- Where C = Cost measured in shillings, while Q = quantity measured in kilogrammes.
- (i) Compute the total cost and average total costs at output level of 10 and 11 kilogrammes. (4 marks)
  - (ii) Determine the Marginal cost of the 12<sup>th</sup> Kilogramme. (4 marks)
- (b) Enumerate the differences between “monopoly” and “Monopolistic” competition. (6 marks)
- (c) Explain the relationship between the Marginal Product (MP) and the Total Product (TP) curve. (6 marks)
- (Total: 20 marks)**

**QUESTION SEVEN**

- (a) Assume the following information represents the National Income Model of an ‘Utopian’ economy.
- $Y = C + I + G$   
 $C = a + b(Y - T)$   
 $T = d + tY$   
 $I = IO$   
 $G = GO$
- Where:**  
 $a > 0; 0 < b < 1$   
 $d > 0; 0 < t < 1$   
 $T = \text{Taxes}$   
 $I = \text{Investment}$   
 $G = \text{Government Expenditure}$
- Required**
- (i) Explain the economic interpretation of the parameters a,b,d and t. (4 marks)
  - (ii) Discuss the three approaches used in measuring the national income of a country and showwhy they give the same estimate. (6 marks)
- (b) Outline the factors that could determine the level of national income of a country. (6 marks)
- (c) With the aid of a well labeled diagram describe the relationship between the short run and long run average cost curve. (4 marks)
- (Total: 20 marks)**

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