

2922/105
HUMAN ECOLOGY AND
ECONOMICS
Oct./Nov. 2022
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL
DIPLOMA IN ENVIRONMENTAL SCIENCE AND TECHNOLOGY

MODULE I

HUMAN ECOLOGY AND ECONOMICS

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Answer booklet;

Non programmable Scientific calculator.

This paper consists of TWO sections: A and B.

Answer ALL the questions in section A and any THREE questions from section B in the answer booklet provided.

Each question in section A carries 4 marks while each question in section B carries 20 marks.

Maximum marks for each part of a question are as shown.

Candidates should answer the questions in English.

This paper consists of 5 printed pages.



Candidates should check the question paper to ensure that all the pages are printed as indicated and that no questions are missing.

SECTION A (40 marks)

Answer ALL questions in this section.

1. State four advantages of large scale production of goods to an organization. (4 marks)
2. Table I shows statements on Articles of Association of a company. Indicate by writing true or false against the statement. (4 marks)

Table I

Statement	True/False
(a) It contains the activities the company is engaged in	
(b) Indicate the procedures to be followed in calling meetings	
(c) It contains details of election procedures	
(d) It indicates the rights of each shareholders	

3. (a) State the law of demand. (2 marks)
- (b) In each of the cases shown in table II, indicate whether the supply will increase, decrease or remain constant. (2 marks)

Table II

Cases	Supply
(i) If demand for coffee rises, the supply of tea is likely to.	
(ii) If the prices of cars fall, the supply of petrol is likely to.	

4. State four disadvantages of concentrating industries in one area within a county. (4 marks)
5. Table III shows the demand schedule for oranges. Draw a demand curve. (4 marks)

Table III

Prices (Ksh)	Quantity demanded
5	100
10	50
20	25
25	5



6. Match the level of production with the current activity shown in table IV. (4 marks)

Table IV

Activity	Level of production
(a) Digging clay soil	
(b) Construction of a bridge	
(c) Selling in a shop	
(d) Growing vegetables	

7. Outline **four** stages involved in the development of a football club. (4 marks)
8. Explain the multigenerational transmission process in a family in reference to the increase in domestic violence incidences. (4 marks)
9. State the **four** functional requisites of a family as a social group. (4 marks)
10. Distinguish between the two dimensions along which social stratification occurs. (4 marks)

SECTION B (60 marks)

Answer any THREE questions from this section.

11. (a) (i) Describe a social group. (2 marks)
- (ii) Explain **four** characteristics of a social group. (10 marks)
- (b) Differentiate between Geselleschaft and Gemeinschaft relationships. (8 marks)
12. (a) (i) Define the term 'stigma'. (2 marks)
- (ii) Explain **three** types of stigma associated to individuals in a society. (12 marks)
- (b) Explain how each of the following actions affect family behaviour:
- (i) family projection process; (3 marks)
- (ii) multigenerational transmission processes. (3 marks)



13. (a) Table V shows a hypothetical production function for a small scale coffee farmer.

Table V

Land	Labour	Total product	Average product of labour	Marginal product of labour
1	0	0	0	—
1	1	3	3	3
1	2	8	4	D
1	3	12	A	4
1	4	15	3.75	E
1	5	17	B	2
1	6	17	C	F
1	7	16	2.29	G
1	8	13	1.625	H

- (i) Determine the values of A, B, C, D, E, F, G and H. (8 marks)
 (ii) Use the data in table V to draw a total product curve. (4 marks)
- (b) (i) State the law of diminishing returns. (2 marks)
 (ii) State the key assumptions of the law of diminishing returns. (6 marks)

14. (a) State **four** advantages of locating a factory near the source of raw materials. (4 marks)

- (b) Define the following costs of production:

- (i) fixed costs; (2 marks)
 (ii) variable costs; (2 marks)
 (iii) total costs. (2 marks)

- (c) Table VI shows the total fixed cost, total variable cost and total cost schedules.

Table VI

Output	Total fixed costs (Shs)	Total variable costs	Total costs (Ksh)
0	50	0	50
1	50	20	70
2	50	30	80
3	50	35	85
4	50	45	95
5	50	65	115
6	50	110	160



- (i) Draw a graph describing the relationship among total cost (TC), total variable cost (TVC) and total fixed costs (TFC). (8 marks)
- (ii) Comment on the nature of the total fixed cost (TFC) curve. (2 marks)
15. (a) (i) Define the term 'money'. (2 marks)
- (ii) Explain the functions of money. (8 marks)
- (b) Explain the general effects of inflation on the Kenyan economy. (10 marks)

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