

0510/2/2022
BIO O/L

**SOUTH WEST REGIONAL MOCK EXAMINATION
GENERAL EDUCATION**

**THE TEACHERS' RESOURCE UNIT (TRU)
IN COLLABORATION WITH**

**THE REGIONAL INSPECTORATES OF PEDAGOGY AND
THE SUBJECT TEACHERS' ASSOCIATIONS (STA)**

WEDNESDAY 30/03/2022 (Afternoon)

ORDINARY LEVEL

| | |
|---------------------|----------------|
| Subject Title | BIOLOGY |
| Paper Number | Paper 2 |
| Subject Code Number | 0510 |

TWO HOURS

INSTRUCTIONS TO CANDIDATES:

Answer any SIX questions.

All questions carry 17 marks each. For your guidance, the approximate mark for each part of a question is indicated in brackets.

You are reminded of the necessity for good English and orderly presentation in your answers.

In calculations, you are advised to show all the steps in your working, giving your answer at each stage.

Calculators are NOT allowed

SECTION I OF SYLLABUS: Choose Only ONE question

1)

- a) Draw a large neatly labelled diagram of a bony fish (6mks)
- b) Describe how fishes are adapted to survive in water (6mks)
- c) State the economic importance of bacteria (5mks)

2)

- a) Give three differences between a plant cell and an animal cell (3mks)
- b) Describe an experiment to test for the presence of proteins in groundnut seeds (5mks)
- c) i) State the characteristics common to all insects (4mks)
ii) What measures can be taken to prevent the spread of malaria? (5mks)

SECTION III OF SYLLABUS: Choose only ONE Question

3)

- a) Define the following terms as used in genetic engineering
 - i) DNA
 - ii) DNA Ligase
 - iii) DNA polymerase (6mks)
- b) Describe the process of puff puff or bread making, stating the role played by yeast (6mks)
- c) ii) How is the biological pest control better than chemical pest control? (2mks)
ii) Explain three ways in which genetic engineering has benefitted man in his daily life (3mks)

4)

- a) Define the following terms
- i) Ecosystem
 - ii) Consumers (2,2mks)
- b) State the role played by the following in the environment
- i) Sunlight
 - ii) Trees. E.g., Mango tree
 - iii) Maggots (4,4,2 mks)
- c) Describe how waste is managed at home, where there is no waste management unit in town. (3mks)

SECTION B

SECTION II OF SYLLABUS: Choose any Three Question

5)

- a) State the roles of the following hormones
- i) Oestrogens
 - ii) Antidiuretic Hormone (ADH)
 - iii) Adrenaline (4,2,1 mks)
- b) Describe the reflex arc involved when the hand accidentally touches a sharp object (10mks)

6)

- a) Give differences between the following:
- i) Respiration and photosynthesis
 - ii) Inspired air and expired air in man (5,3mks)
- b) Describe how gaseous exchange takes place in a flowering plant (5mks)
- c) Name some locally produced products of fermentation at home (4mks)

- 7)
- a) Define the following terms
- i) Digestion
 - ii) Egestion (3,2 mks)
- b) Describe the roles played by each of the following organs in the digestive system
- i) Liver
 - ii) Stomach
 - iii) Ileum (3,4,5 mks)

- 8)
- a) Define the following terms:
- i) Gene
 - ii) Species (2,2 mks)
- b) When Mendel crossed pure breeding tall pea plants with pure breed dwarf types, the offspring produced were all tall pea plants. What will be the results of:
- i) Allowing the F_1 offspring to breed among themselves?
 - ii) A cross between an F_1 offspring and a dwarf pea plant?

Use appropriate genetic symbols/diagram to show the crosses above (13 mks)

THE END