

KISII UNIVERSITY
UNIVERSITY EXAMINATIONS
FIRST YEAR EXAMINATION FOR THE AWARD OF THE CERTIFICATE
IN ANIMAL SCIENCE AND TECHNOLOGY

BOTA 00211: BOTANY AND ZOOLOGY

STREAM: Y1S1

TIME: 2HOURS

DAY:

DATE:

INSTRUCTIONS

1. Do not write anything on this question paper.
2. Answer ALL questions in section A [COMPULSORY] and any other TWO questions of your choice from section B.

SECTION A [COMPULSORY] [30 MARKS]

QUESTION 1

Name the functions of the following

- | | |
|-----------|----------|
| i. Bud | (2marks) |
| ii. Stem | (2marks) |
| iii. Root | (2marks) |
| iv. Leaf | (2marks) |
| v. Fruit | (2marks) |

QUESTION 2

Briefly describe the following terms.

- | | |
|-------------------|----------|
| i. Nucleus | (1marks) |
| ii. cell membrane | (1marks) |
| iii. Cytology | (1marks) |
| iv. Cell division | (1marks) |
| v. Golgi bodies | (1marks) |
| vi. Mitochondria | (1 mark) |
| vii. RNA | (1 mark) |

- viii. DNA (1 mark)
- ix. Taxonomy (1 mark)
- x. Conservation (1 mark)

QUESTION 3

(a) Differentiate the following .

- i. Prokaryotic cell and eukaryotic cell. (2marks)
- ii. Algae and plants (2marks)
- iii. Asexual and sexual reproduction (2marks)
- iv. RNA and DNA (2marks)

(b) Explain the importance of zoos (6marks)

SECTION B [40 MARKS]

Answer any **two** questions from this section.

Question 4

(i) Explain beneficial bacteria. (10marks)

(ii) Describe amoeba under the following using diagrams where possible. (10 marks)

- a. Feeding
- b. Reproduction
- c. Locomotion

Question 5

(a) Briefly explain the following stems of specific plant types.

- i. Tuber (2marks)
- ii. Rhizome (2marks)
- iii. Bulb (2marks)
- iv. Grapevines (2marks)
- v. Bryophytes (2marks)

(b) Explain the structure of the stem in relation to its function. (5marks)

(c) Differentiate between mitosis and meiosis giving examples appropriately. (5 marks)

Question 6

(i)With the help of a well labeled diagram draw the plant cell. (10marks)

(ii)Briefly describe the importance of botany and zoology. (10marks)