



MURANG'A UNIVERSITY COLLEGE
(A Constituent College of Jomo Kenyatta University of Agriculture and Technology)

DIPLOMA IN APPLIED BIOLOGY

SCHOOL OF PURE AND APPLIED SCIENCES

CLASS: AS/BIO/14D

COURSE CODE: ASB 1207

TAXONOMY , ECOLOGY , SOIL STUDY

END OF TERM

Date: 20th November 2015

TIME : 3HOURS NOV/DEC 2015

INSTRUCTIONS TO CANDIDATES.

This paper consists of two sections, A and B. Answer ALL questions in section A and any THREE questions from section B. Each question in A carries 4 marks while each question in section B carries 20 marks.

SECTION A (40 MARKS)

1. State any four characteristics of the phylum coelenterate (4 marks).
2. a) State FOUR criteria upon which classification of organisms may be based. (2 marks)
b) Name the phylum with organisms showing each of the following features
i) Nematoblasts
ii) Clitellum (2 marks)
3. State the structural differences between
a) Polychaeta and Oligochaeta (2 marks)
b) Angiospermae and Gymnospermae (2 marks)
4. Define the following terms
(a) Ecosystem (2 marks)
(b) Saprophytes (2 marks)
5. Briefly describe role of protozoa in soil (4 marks)
6. Describe lake aging (4 marks)
7. Describe rivers and streams ecosystem (4 marks)
8. Discuss gravitational water (4 marks)
9. Discuss the economic importance of organisms from the class Cestoda (4 marks)
10. Briefly describe the life cycle of the Hydroid. (4 marks)

SECTION B(60 MARKS)

11. a) state TWO distinguishing features of

i) a simple sponge

ii) a shark

iii) liverfluke

iv) snake

v) starfish

(5 marks)

b) Using the features stated in (a) construct a dichotomous key for

a- a Starfish

b- Sponge

c – Snake

d- Liverfluke

(11 marks)

(c) Classify A B C D to its phylum and class.

(4 marks)

12. a) Differentiate between the classes turbellaria and trematoda

(12 marks)

b) State the general characteristics of each of the following phylum

i) Platyhelminthes

(5 mark)

ii) Nematoda

(3 marks)

13. Discuss the effects of mines to marine and terrestrial ecosystem

(20 marks)

14. With aid of a diagram discuss oceanic ecosystem

(20 marks)

15. Name any two classes of the following phyla

i) Bryophyte

ii) Pteridophyta

0

(4 marks)

b) State the general characteristics of each of the three classes of phylum platy helminthes. Give specific genus in each class

(12 marks)

c) Distinguish between monocotyledon and dicotyledonous

(4 marks)