BLG1502
ANIMAL AND PLANT DIVERSITY

Duration 2 Hours

EXAMINERS
FIRST MR MH MKHOMBO
SECOND MR AR MUDAU

100 Marks

Closed book examination

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This paper consists of Four (4) pages.

ANSWER ALL THE QUESTIONS IN THE EXAMINATION ANSWER BOOK PROVIDED.
QUESTION 1

Choose the correct answer for each of the following descriptions. Each question has ONLY ONE correct answer. Choose the correct answer and write down the letter next to the question number (1.1 - 1.10).

1.1 The joint evolution of two interacting species, each in response to selection imposed by the other
A. Commensalism  
B. Symbiosis  
C. Coexistence  
D. Coevolution

1.2 The innermost layer of the cortex in plant roots, a cylinder one cell thick that forms the boundary between the cortex and vascular cylinder
A. Epidermis  
B. Endodermis  
C. Pencycle  
D. Stele

1.3 An anatomical structure found in many non-mammalian vertebrates which functions as a common exit for digestive, excretory and reproductive systems
A. Caecum  
B. Cloaca  
C. Anus  
D. Oviduct

1.4 The maintenance of internal stability and constancy in living systems
A. Equilibrium  
B. Haemostasis  
C. Homeostasis  
D. Metastasis

1.5 A type of a cell with membrane enclosed nucleus and organelles
A. Prokaryotic  
B. Stem  
C. Eukaryotic  
D. Ribosomes

1.6 An ovule producing reproductive organ of a flower consisting of the stigma, style and ovary
A. Pistil  
B. Stamen  
C. Ovule  
D. Anther

[TURN OVER]
1.7 The scientific discipline concerned with the naming of organisms
A. Systematics
B. Cladistics
C. Phylogeny
D. Taxonomy

1.8 The part of a flower that develops into a fleshy fruit
A. Stigma
B. Style
C. Ovary
D. Ovule

1.9 The primary body cavity of most invertebrates, containing circulatory fluid
A. Abdomen
B. Coelom
C. Hemocoel
D. Haemolymph

1.10 A group of small, simple, green land dwelling plants of which a few are aquatic
A. Moss
B. Algae
C. Bryophytes
D. Chlorophytes

[10x1 = 10]

QUESTION 2

2.1 Distinguish between phylogeny and systematics (4)
2.2 Write down the four major modes of nutrition in prokaryotes (4)
2.3 Name and describe the three groups of prokaryotes with regard to oxygen (O₂) (6)

[14]

QUESTION 3

3.1 Write down the names of four main groups of land plants and give an example of each (8)
3.2 Explain the process and function of double fertilization (4)
3.3 Compare and contrast the nutritional mode of a fungus with human nutritional mode (4)
3.4 Describe the type of reproduction as it occurs in fungi (3)

[18]

[TURN OVER]
QUESTION 4

4.1 What is meant by apical dominance? (2)
4.2 Write down the names of three types of plant tissues and their functions (6)
4.3 Define the term photosynthesis (2)
4.4 Write down the balanced overall reaction equation that take place during photosynthesis (4)

[14]

QUESTION 5

5.1 Distinguish between sexual and asexual reproduction (4)
5.2 Write down the three mechanisms of asexual reproduction (3)
5.3 Write down the name of female gonads and the hormones they produce (2)
5.4 Define fertilization (2)

[11]

QUESTION 6

6.1 Distinguish between herbivores and omnivores also give an example of each (4)
6.2 Distinguish between intracellular and extracellular digestion and give an example of an organism in which they occur (4)

[8]

QUESTION 7

7.1 Differentiate between an artery and vein (4)
7.2 Write down the names of the chambers of mammalian heart. (2)
7.3 Which veins carry oxygenated blood in mammalian circulatory system? (1)
7.4 Differentiate between systole and diastole in mammalian heart (4)

[11]

QUESTION 8

8.1 Differentiate between innate and acquired immunity (4)
8.2 Write down the names of five classes of antibodies, indicate which ones are pentameric, dimeric or monomeric (8)
8.3 Distinguish between polyclonal and monoclonal antibodies (2)

[14]

TOTAL: 100 marks