

ANIMAL AND PLANT DIVERSITY

BLG1502

“FI Concession” MAY/JUNE 2017 Portfolio

100 Marks

Due Date: 25 August 2017

Examiners:

Mr M.H Mkhombo

Mr A.R Mudau

INSTRUCTION

- ✓ This paper consists of TWO (2) pages.
- ✓ Answer ALL questions.
- ✓ PLAGIARISM is strictly discouraged - “avoid copy and paste.”

[TURN OVER]

QUESTION 1**[20]**

- 1.1 Depending upon the energy source and the carbon source. Describe four possible nutritional modes used by prokaryotes. (8)
- 1.2 Describe the structure and functions of prokaryotic cell walls. (5)
- 1.3 Distinguish between the structure and staining properties of gram-positive and gram-negative bacteria. (4)
- 1.4 Describe three mechanisms motile bacteria use to move. (3)

QUESTION 2**[20]**

- 2.1 Discuss the adaptations that have enabled flowering plants to overcome the following problems associated with life on land.
- (a) The absence of an aquatic environment for reproduction. (5)
- (b) The absence of an aquatic environment to support the plant body. (5)
- 2.2 Describe the similarities and differences between the biochemical pathways of aerobic respiration and photosynthesis in eukaryotic cells. Include in your discussion the major reactions, the end products, and energy transfers. (10)

QUESTION 3**[20]**

- 3.1 List FOUR advantages and FOUR disadvantages of algae. (8)
- 3.2 Describe the following terms and give appropriate examples of each:
(a) Symbiosis, (b) Mutualism, (c) Commensalism, (d) Parasitism. (12)

QUESTION 4**[20]**

- 4.1 Describe the differences between cellular mediated immunity and humoral mediated immunity. (6)
- 4.2 Define active natural, passive natural, active acquired, and passive acquired immunity. Give an example of each. (10)
- 4.3 Describe four non-specific defence mechanisms. (4)

QUESTION 5**[20]**

- 5.1 Classify hormones in terms of their chemical composition and give two examples of each. (10)
- 5.2 Describe the anterior pituitary gland and list the hormones secreted by it. (10)

TOTAL: 100 marks