

QPCODE 2013570606

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DMI-ST. EUGENE UNIVERSITY

ZAMBIA

DEGREE EXAMINATION – JUNE 2024

Semester: I

800 ZO 106ZOOLOGY I

Time: 3:00 Hours

Max. Marks: 100

Answer any FIVE Questions (5 x 20 = 100 Marks)

1. a) i. Define taxonomy and state the hierarchical classification. (5 Marks)
ii. State the two methods used in classification and briefly explain the importance of Binomial Nomenclature. (5 Marks)
- b) Define the following terms: (5 Marks)
 - i. Phonetics
 - ii. Chemotaxonomy
 - iii. Cytotaxonomy
 - iv. Paleotaxonomy
 - v. numerical taxonomy
- c) State the characteristic features of Bacteria and Explain why having three separate domains is important for classifying organisms. (5 Marks)
2. a) i. Draw and label an animal cell. (5 Marks)
ii. Briefly explain the functions of five major parts of the plant cell. (5 Marks)
- b) Outline parts of a microscope and their functions. (10 Marks)
3. a) Briefly describe the main structures of the male and female reproductive parts and outline the role of the reproductive system in human development. (10 Marks)
- b) i. Describe the FOUR main organs of the human urinary system and explain their specific functions. (5 Marks)
ii. Briefly outline the process of urine formation. (5 Marks)
4. a) i. Briefly describe the work of Gregor Mendel and his contribution to the foundation of genetics. (5 Marks)

- ii. Explain the significance of the discovery of DNA structure by Watson and Crick.
(5 Marks)
- b) Briefly discuss any three syndromes associated with chromosomal deletion. (10 Marks)
5. a) i. Define the terms "venom" and "poison" and describe two ways in which venomous snakes can deliver their venom. (5 Marks)
- ii. Discuss two adaptations venomous snakes possess that aid in capturing prey and briefly mention one medical benefit derived from snake venom. (5 Marks)
- b) i. Describe two different types of fouling organisms and their attachment mechanisms.
(5 Marks)
- ii. Briefly explain two methods used to control the growth of fouling organisms and Mention one advantage and one disadvantage of each control method mentioned.
(5 Marks)
6. a) Describe FIVE key characteristics that distinguish animals from other kingdoms of life.
(10 Marks)
- b) Describe the advantages and disadvantages of sexual reproduction compared to asexual reproduction in protozoa. (5 Marks)
- c) Describe three key characteristics that define arthropods. (5 Marks)
7. a) Explain the dangers of exposure to carcinogens in the workplace and describe two control measures that can be implemented to minimize worker risk.(10 Marks)
- b) Describe two risk factors for developing cancer and Explain two ways to potentially reduce the risk of developing cancer. (5 Marks)
- c) Briefly describe two main approaches used in cancer management. (5 Marks)