



**PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF HEALTH AND APPLIED SCIENCES
DEPARTMENT OF NATURAL AND APPLIED SCIENCES**

QUALIFICATION: BACHELOR OF SCIENCE	
QUALIFICATION CODE: 07BOSC	LEVEL: 5
COURSE CODE: GNB502S	COURSE NAME: GENERAL BIOLOGY 1B
SESSION: JANUARY 2019	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

SUPPLEMENTARY/SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
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INSTRUCTIONS
<ol style="list-style-type: none">1. Write clearly and neatly2. Number the answers clearly3. All written work MUST be done in blue or black ink4. No books, notes and other additional aids are allowed5. Mark all answers clearly with their respective question numbers

ATTACHMENTS

NONE

THIS QUESTION PAPER CONSISTS OF 5 PAGES

(Including this front page)

QUESTION 1:

Multiple choices

[5]

- 1.1 Which structure helps a freshwater protist get rid of excess water? (1)
- a) food vacuole
 - b) contractile vacuole
 - c) macronucleus
 - d) micronucleus
- 1.2 Which among the following is not a type of plant-like protists? (1)
- a) zooflagellate
 - b) dinoflagellate
 - c) phaeophyte
 - d) bacillariophyte
- 1.3 The innermost portion of a virus's structure is made up of; (1)
- a) both DNA and RNA
 - b) either DNA or RNA
 - c) a protein capsid
 - d) all of them
- 1.4 A(n) _____ is the type of carbohydrate that is NOT found in the cell walls of archaeobacteria. (1)
- a) amino acid
 - b) peptidoglycan
 - c) polysaccharide
 - d) lipopolysaccharide
- 1.5 Fungi that have coenocytic hyphae and reproduce sexually through conjugation belong to the phylum. (1)
- a) Zygomycota
 - b) Basidiomycota
 - c) Ascomycota
 - d) Deuteromycota

QUESTION 2:

Fill in the blanks

[5]

- 2.1 Poisonous “red tides” are caused by population explosions of _____ . (1)
- 2.2 _____ are bacterial viruses with a polyhedral head and a helical tail. (1)
- 2.3 Yeast cells undergo a form of asexual reproduction called _____. (1)
- 2.4 _____(i)_____ plants lack vascular tissue and are called _____(ii)_____. (1)
- 2.5 According to the direction inhibition hypothesis, the status of axillary buds – dormant or growing – depends on the relative concentration of _____(i)_____ moving down from the shoot tip and _____(ii)_____ moving up from the roots. (1)

QUESTION 3:

Define the following terms

[5]

- 3.1 Prions (1)
- 3.2 Frond (1)
- 3.3 Parthenogenesis (1)
- 3.4 Connective tissue (1)
- 3.5 Cytokinin (1)

QUESTION 4:

Distinguish between the pairs of the following terms.

[10]

- 4.1 Staphylococcus; streptococcus (2)
- 4.2 Mouth pore; anal pore (2)
- 4.3 Endocrine; exocrine gland (2)
- 4.4 Vascular cambium; cork cambium (2)
- 4.5 Varieties; strains (2)

QUESTION 5:

One sentences answers

[5]

- 5.1 What are homologous structures? (1)
- 5.2 What was the problem with John Ray's naming the organism? (1)
- 5.3 Identify one ecologically important characteristics of cyanobacteria. (1)
- 5.4 What is the scientific name for a yeast that is used in wine making? (1)
- 5.5 Name the first group of plant hormones. (1)

QUESTION 6:

Short questions

[12]

- 6.1 Describe the importance of bone marrow. (2)
- 6.2 Name the algae which are unicellular. (2)
- 6.3 Name three different types of Archaea that may be distinguished based on their different habitats? (3)
- 6.4 Name the three main groups within the kingdom Protista. What characteristics distinguish each group from the other two? (3)
- 6.5 Botanists sometime refer to ethylene as the "senescence hormone." What is the basis for this term? (2)

QUESTION 7:

Longer questions

[18]

- 7.1 Name the division of gymnosperm and compare the leaf structure and the places where they grow. (6)
- 7.2 Describe the germ layers and state their functions. (6)
- 7.3 In a tabulated form compare protostomes and deuterostomes giving two examples of each. (6)

QUESTION 8:

[10]

Structures and functions

- 8.1 Draw and label the structure of a mushroom fungi. (4)
- 8.2 Using the figures below (1 and 2);
- 8.1.1 Label the parts from a-f
- 8.1.2. Name the symmetry types of g and h
- 8.1.3 Distinguish between the lifestyles of the two animals in (Fig. 1 & 2) (6)

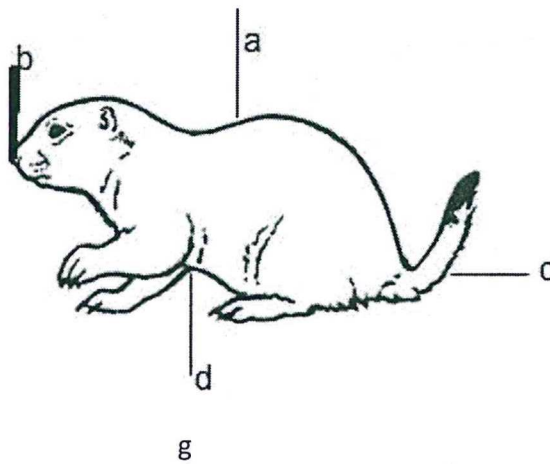


Fig 1

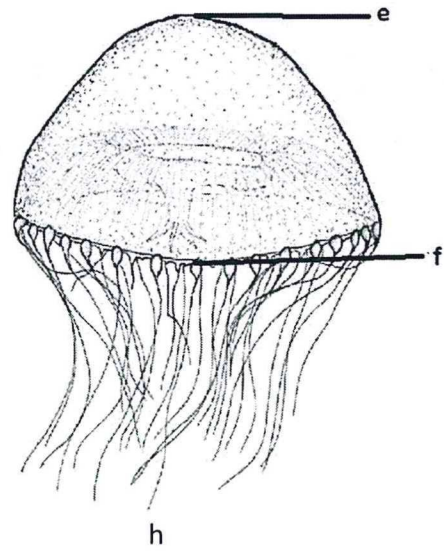


Fig 2

QUESTION 9:

Essay question

[30]

- 9.1 Sketch and describe the unique structure of a paramecium. (15)
- 9.2 Describe the main endocrine glands of the human body, where they are located and their functions? (15)

END OF EXAM