



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF HEALTH, APPLIED SCIENCE AND NATURAL RESOURCES

Department of Agriculture and Natural Resources Sciences

QUALIFICATION: Bachelor of Science in Agriculture	
QUALIFICATION CODE: 07BAGA	LEVEL: NQF Level 5
COURSE: Introduction to General Biology	COURSE CODE: IBI511S
DATE: June 2022	PAPER: Theory
DURATION: 3 Hours	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S):	Mr C. L. Akashambatwa
MODERATOR:	Mrs. G.L. Theron

**THIS QUESTION PAPER CONSISTS OF 3 PAGES
(INCLUDING THIS FRONT PAGE)**

INSTRUCTIONS

1. Answer ALL the questions.
2. Write clearly and neatly.
3. Number the answers clearly.

PERMISSIBLE MATERIALS

1. Examination paper.
2. Examination script.

Question 1

1.1. How does a ribosome function in protein synthesis? (2)

1.2. What is the major function of the nucleus? (2)

1.3. What are the components molecules of DNA? (3)

1.4. Name and explain with examples the two types of cell reproduction. (6)

1.5. Explain how the root and the shoot systems depend on each other. (4)

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Question 2

2.1. Distinguish between vertebrates and invertebrates and give two examples of each. (4)

2.2. Describe the Phylum Porifera and give at least four characteristics of this group of animals. (5)

2.3. Draw a generic insect and label its major body sections. (3)

2.4. Mention five biological characteristics of plants. (5)

2.5. Name the different components of the vascular system and the function of each. (2)

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Question 3

3.1. Seed producing plants are divided into two groups, name the groups, and briefly describe two common characteristics per group. (6)

3.2. Briefly explain how mosses and ferns plants reproduce? (2)

3.3. Kingdom fungi is divided into five phyla, name them and give one example of each. (10)

3.4. Name two fungal phyla useful to human. (2)

3.5. There are two bacteria kingdoms, how are these two kingdoms distinguished from one another? (2)

3.6. Briefly describe Kingdom Archaeobacteria. (2)
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Question 4

4.1. Describe the bacteria in Phylum Thermoacidophiles. (4)

4.2. Name and explain Eubacteria Shapes and illustrate their shapes. (6)

4.3. What is Gram Staining? (4)

4.4. Explain the differences between gram-positive and gram-negative bacteria. (6)

4.5. Draw a sketch of a bacterium and label it correctly. (6)

4.6. Describe reproduction in Bacteria. (4)

4.7. Explain how some bacteria build resistance to antibiotic drugs. (3)

4.8. Using a table, distinguish between monocot and dicot plants. (7)

[40]

Total [100]