NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF NATURAL RESOURCES AND SPATIAL SCIENCES

Department of Agriculture and Natural Resources Sciences

QUALIFICATION: Bachelor of Agriculture	
QUALIFICATION CODE: 07BAGR	**LEVEL:** NQF Level 5
COURSE: Introduction to General Biology	**COURSE CODE**: IBI511S
DATE: June 2019	**SESSION:**
DURATION: 3 Hours	**MARKS:** 100

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

THIS QUESTION PAPER CONSISTS OF 3 PAGES (INCCLUDING 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. Name and explain with examples the two types of cell reproduction (4)

1.2. Name and explain the seven characteristics of living things (7)

1.3. Name five major components of the cell. (5)

1.4. Why do plants need to exchange gases with the environment? (3)

1.5. What do you understand by Lamarck's Theory of Evolution? (2)

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Question 2

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

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

2.3. What is Gram Staining? (4)

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

2.5. Give an example of an animal that evolved over a period and give specific characteristics or features that clearly evolved. (2)

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Question 3

3.1. Name the three sources of genetic variation and briefly explain each. (6)

3.2. Distinguish between Prokaryotic and Eukaryotic cells, use a table format. (10)

3.3. Differentiated between root cap and Vascular cambium (6)

3.4. Explain the cell cycle in full. (8)

3.5. Draw an Endomembrane System and label its major parts. (5)

[35]

Question 4

4.1. Explain kingdom Protista (3)

4.2. List the functions of the following plant parts; leaf, stem, roots, nodes, internode. (5)

4.3. Explain the process of photosynthesis, then draw and show the chemical reaction formula (6)

4.4. One of Namibia's initiative to protect and conserve biodiversity outside protected areas is through the CBNRM. Define what CBNRM stands for and what are the program's main three elements. (6)

4.5. Explain what a population is (ecologically). (3)

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[TOTAL 100]