



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF HEALTH, APPLIED SCIENCE AND NATURAL RESOURCES**

**Department of Agriculture and Natural Resources Sciences**

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

<b>SECOND OPPORTUNITY/SUPPLEMENTARY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER(S):</b>	Mr C. L. Akashambatwa
<b>MODERATOR:</b>	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. Define Prokaryotes and Eukaryotes. (4)
- 1.2. What is crossing over? In which period of meiosis does this event occur and what is its importance? (5)
- 1.3. What are the functions of a nucleus? (5)
- 1.4. List seven (7) differences between plant and animal cells in a table format (14)
- [28]

### **Question 2**

- 2.1. What is a meristem, where are meristems located in plants and what are their functions? (4)
- 2.2. Distinguish between monoecious and dioecious flowers and give an example of each (6)
- 2.3. In the Etosha National park, it is found that some animals occur more abundantly than others. Which animals would you expect to see more, the Lion or the Oryx? Give a reason for your answer. (3)
- 2.4. Cells are the basic structural units of living organism. Explain what that means (5)
- 2.5. Why is a mushroom regarded as fungus rather than a plant? (3)
- [21]

### **Question 3**

- 3.1. Explain the functions of a vacuole in the cell (4)
- 3.2. Draw a transverse section of a dicot leaf and label it correctly. (10)
- 3.3. Why is the transfer of energy in an ecosystem referred to as energy flow, not energy cycling? (2)
- 3.4. Distinguish between the functions of mitosis and meiosis. (8)
- 3.5. Plants pollinated by wind have various adaptations/features to facilitate that. Provide the 8 different features as well as the reason for each. (8)
- [32]

**Question 4**

**4.1** Name two plant classifications under angiosperm group and give four characteristics under each class **(10)**

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

**4.3.** Name and explain the three classes of RNA. **(3)**

**[19]**

**[TOTAL 100]**