

**UNIVERSITY OF SWAZILAND**

**MAIN EXAMINATION PAPER 2020**

**TITLE OF PAPER : AQUATIC CONSERVATION**

**COURSE CODE : BIO618**

**TIME ALLOWED : THREE HOURS**

**INSTRUCTIONS :**

- 1. ANSWER ANY TWO (2) QUESTIONS**
- 2. EACH QUESTION CARRIES FIFTY (50) MARKS**

**SPECIAL REQUIREMENTS: NONE**

**THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN  
GRANTED BY THE INVIGILATORS**

**QUESTION 1**

Identify the major physical and chemical components of lotic ecosystems and how they influence these systems and associated biota. Your discussion should also consider how these vary with the various stages of the aquatic body.

[Total marks = 50]

**QUESTION 2**

Using the article provided, deliberate on the community interactions within the aquatic system discussed and repercussions of their alteration. Specifically, identify the causes and results of disturbances on both biota and limnology and suggest mitigation strategies.

[Total marks = 50]

**QUESTION 3**

As the government Environmental Officer you have been tasked with prioritising water usage needs in the Nkomati watershed, feeding the Maguga dam. This watershed has a hydroelectric system that provides power and water to Mbabane. There is a commercial fishery in the river and the watershed is widely used by locals and visitors for recreation, irrigation and livestock. Identify all possible practices could impact the water quality of the dam and recommend mitigation measures.

[Total marks = 50]