

UNIVERSITY OF SWAZILAND

MAIN EXAMINATION PAPER 2019

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

Explain how temperature, nutrients, light and dissolved oxygen may change with depth in the water column of lakes and show how these changes can affect biological communities.

[Total marks = 50]

QUESTION 2

Describe the communities found in freshwater system. Using Lake Victoria as an example, deliberate on the outcome of anthropogenic interventions in these communities and how these may be addressed.

[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]