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MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATION**

**2016/2017 ACADEMIC YEAR**

**SCHOOL OF SCIENCE AND INFORMATION SCIENCES**

**THIRD YEAR SECOND SEMESTER EXAMINATIONS**

**FOR THE DEGREE OF BACHELOR OF SCIENCE (ZOOLOGY)**

**COURSE CODE: ZOO 320**

**COURSE TITLE: FRESHWATER ECOLOGY**

**DATE: 12TH JULY 2017 TIME: 1100 – 1300HRS**

**INSTRUCTIONS**

1. Answer **ALL** questions in **Section A** and **ANY TWO** insection B
2. Illustrate your answer with well labeled diagrams where appropriate.

**SECTION A: ANSWER ALL THE QUESTIONS (30 MARKS)**

1. Define the following terms as used in aquatic ecology
2. Specific heat capacity
3. River discharge **3 marks**
4. Giving examples, outline the major feeding groups of insects in aquatic environment **3 marks**
5. Water has a high specific heat capacity. Explain the ecological importance of this property.

**3 marks**

1. Briefly explain the Horton Strahler method (1952) of stream ordering

**3 marks**

1. Define the term residence time. List two methods that can be used to determine the residence time of water in a reservoir **3 marks**
2. Differentiate between photic and aphotic zones in a lentic ecosystem

**3 marks**

1. Briefly describe the eutrophic lakes **3 marks**
2. Identify the role of macrophytes in freshwater ecosystems **3 marks**
3. Identify the main water reservoirs of the hydrological cycle. **3 marks**
4. Briefly explain the demotechnic growth concept **3 marks**

**SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)**

1. Using the origin of lakes as the mode of classification, identify five types of lakes **20 marks**
2. Describe how the phytoplankton communities are adapted to live in lentic ecosystems **20 marks**
3. Briefly explain how the pH of water changes during a 24 hour period in waters of high and low alkalities  **20 marks**

**//END**