OCTOBER/NOVEMBER 2016 EXAMINATION

COURSE CODE: BIO 405

COURSE TITLE: HYDROBIOLOGY

TIME ALLOWED: 2HOURS

INTSRUCTION: QUESTION ONE IS COMPULSORY AND ANY OTHER THREE QUESTIONS. PROVIDE ILLUSTRATIONS WHERE NECESSARY.

1. **a.** What do you understand by the term: Freshwater Major Habitat Types (MHTs)? **(5marks)**
   b. Write short notes on the following:
   i. Large lakes **(4marks)**
   ii. Montane freshwaters **(4marks)**
   iii. Xeric freshwaters **(4marks)**
   iv. Temperate coastal rivers **(4marks)**
   v. Oceanic islands **(4marks)**

2. **a.** Briefly discuss the nature of fresh water ecosystem **(5marks)**
   b. Outline the physical and/or chemical nature of freshwater under the following characteristics;
   i. Colour and Turbidity **(2marks)**
   ii. Organic constituents **(2marks)**
   iii. Temperature **(2marks)**
   iv. Pressure, Density and Buoyancy **(2marks)**
   v. pH **(2marks)**

3. a. Outline the basic features of Wikki spring. **(5marks).**

b. Provide reasons why Lake Tangayinka in Africa is an important biological resource for the study of speciation in evolution? **(5marks).**

c. State **five** chemical nature of Lake Tangayinka **(2 ½ marks)**

d. Mention **five** major natural vegetation types of Lake Chilwa. (**2 ½ marks)**

4. a. Define water pollution? **(2marks).**

b. State any **three (3)** major causes of water pollution? **(3marks).**

c. Explain the effects of water pollution on the ecosystem **(5marks).**

d. State any **five (5)** water-related parasitic diseases and their means of transmission **(5marks).**

5. a. Outline **four** (4) techniques for measuring primary production in aquatic systems

 (4marks)

b. State **four (4)** importances of benthic invertebrates **(4marks).**

c. Describe the general nature benthic invertebrates **(7marks).**

6. a. Identify **three (3)** reasons for monitoring of environmental quality parameters **(3marks)**

b. Briefly explain the diverse parameters for the determination of water quality **(12marks)**