

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE
IN BIOLOGY

ZOOL 311: FRESHWATER BIOLOGY

STREAMS: B.SC (BIO) Y3S1

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 06/12/2017

8.30 A.M. – 10.30 A.M.

INSTRUCTIONS: ANSWER ALL QUESTIONS IN SECTION A AND ANY TWO IN SECTION B

SECTION A (30 MARKS)

- Q1. Write explanatory notes on each of the following concepts:
- (a) Zonation of freshwater lake. [2 marks]
 - (b) Decomposition of organic matter in streams and rivers. [2 marks]
 - (c) The feeding guilds in rivers. [2 marks]
- Q2. Distinguish between the following terms.
- (a) Autochthonous and Allochthonous organic matter. [2 marks]
 - (b) Lentic and lotic ecosystems. [2 marks]
 - (c) Exorheic and endorheic rivers. [2 marks]
- Q3. Describe and illustrate the hydrological cycle in biosphere. [4 marks]
- Q4. Write explanatory notes on the following concepts
- (a) Groundwater Biota [2 marks]
 - (b) Wetland ecosystems [2 marks]
 - (c) Drawdown phenomena in lakes
 - (d) Drift of aquatic macroinvertebrates. [2 marks]
- Q5. (a) Describe and illustrate the flow of energy in a lake. [3 marks]
- (b) Explain briefly the origin and distribution of lakes on earth. [3 marks]

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SECTION B (40 MARKS)

- Q7. Discuss the mixing of water in holomictic and meromictic lakes. [20 marks]
- Q8. Write an essay on the causal remedies of water pollution. [20 marks]
- Q9. Discuss citing examples the river continuum in a typical river. [20 marks]
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