

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**SECOND YEAR EXAMINATION FOR THE AWARD OF DEGREE OF  
BACHELOR OF SCIENCE (ENVIRONMENTAL SCIENCE)**

**ENSC 204: GLOBAL ECOSYSTEMS AND ENVIRONMENT**

**STREAMS: BSC. (ENSC) Y2S2**

**TIME: 2 HOURS**

**DAY/DATE: MONDAY 7/4/2014**

**2.30 P.M. – 4.30 P.M.**

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**INSTRUCTIONS:**

Answer all questions in section A and any two in section B

**SECTION A: (30 MARKS)**

1. Differentiate between the following terms
  - a) Biome and ecosystem [2 marks]
  - b) Habitat and niche [2 marks]
  - c) Detritus and grazing food chains [2 marks]
2. a) Briefly explain the number of trophic levels and energy availability for each level [4 marks]  
b) Briefly discuss inverted pyramids [6 marks]
3. Briefly discuss how food web in natural environments depict resilience. [4 marks]
4. Briefly discuss the 3 geographical conditions that may result into deserts [6 marks]
5. Describe arctic and alpine tundra [4 marks]

**SECTION B: [40 MARKS]**

6. a) With specific examples, discuss the adaptations of fauna in savannah grasslands [10 marks]

- b) Discuss the factors affecting production in lakes [10 marks]
7. a) With specific examples, discuss how introduction of alien flora and fauna can disrupt natural ecosystems [10 marks]
- b) Discuss how ecosystem approach can be adopted for the sustainability of the environment [10 marks]
8. Discuss competition for light and nutrients in tropical rain forests [20 marks]
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