

# **UNIVERSITY OF SWAZILAND**

**Faculty of Health Sciences**

**(BSC) IN ENVIRONMENTAL HEALTH**

**FIRST SEMESTER FINAL EXAMINATION PAPER DECEMBER 2013**

**TITLE OF PAPER** : ENVIRONMENTAL ECOLOGY

**COURSE CODE** : EHM315

**DURATION** : TWO HOURS

**MARKS** : 100

**INSTRUCTIONS** : ANSWER ONLY FOUR QUESTIONS

: EACH QUESTION CARRIES 25 MARKS

: BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER

**DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR**

### QUESTION ONE

1. Define the term ecology. (2 marks).
2. What are the levels of biological organizations at which ecological interactions occur? (5 marks).
3. Discuss the areas that ecology is concerned with. (4 marks).
4. What is environmental disease? Give two examples in your setting. (4 marks).
5. What is the difference between an ecosystem and an ecosystem community? (4 marks).
6. Name two types of thermodynamic systems and list the general characteristics of a system. (6 marks).

**TOTAL 25 MARKS**

### QUESTION TWO

1. What is the difference between a negative and a positive feedback? Give an example of each. (6 marks).
2. In the table below, fill in the necessary information for the conventions/Protocol/organization respectively. (18 marks).

Convention/Protocol/ Organization	Year put in place	Where was it drafted/formed	What does it address
1. Kyoto Protocol			
2. Montreal Protocol			
3. CITIES			
4. Stockholm Convention			
5. IUCN			
6. UNEP			

3. Who was the author of the *Silent Spring* which influenced people's thinking about the modern environmental movement in the 1960s? (1 mark).

**TOTAL 25 MARKS**

### QUESTION THREE

1. Farming has always been described as managing land to keep it in an early stage of succession. What does this mean to you as an ecology student? Explain how it is achieved? (10 marks).
2. What is ecological restoration? (2 marks).

3. List the four principles of ecological restoration. (4 marks).
4. Differentiate between primary succession and secondary succession and name the three general kinds of species that are involved in a succession process. (9 marks).

**TOTAL 25 MARKS**

**QUESTION FOUR**

1. What is a biome? (1 mark).
2. In a table similar to the one below, describe the characteristic of the given biomes. (24 Marks).

<b>Biome</b>	<b>Climatic conditions</b>	<b>Animal species found</b>	<b>Plant species found</b>	<b>Where is this biome located</b>
<b>Grassland</b>				
<b>Tropical forest</b>				
<b>Desert</b>				
<b>Tundra</b>				
<b>Chaparral</b>				
<b>Taiga</b>				

**TOTAL 25 MARKS**

**QUESTION FIVE**

Describe the

1. Coral reefs biome under the following themes
  - a. What is it? (5 marks).
  - b. Their importance. (5 marks).
  - c. Human impacts. (5 marks).
2. Barrier Islands
  - a. What they are? (3 marks).
  - b. Importance. (3 marks).
  - c. Human impacts. (4 marks).

**TOTAL 25 MARKS**