

UNIVERSITY OF SWAZILAND

Faculty of Health Sciences

(BSC) IN ENVIRONMENTAL HEALTH

SECOND SEMESTER MAIN EXAMINATION PAPER MAY 2014

TITLE OF PAPER : ENVIRONMENTAL ECOLOGY II

COURSE CODE : EHS 556

DURATION : TWO HOURS

MARKS : 100

INSTRUCTIONS :

- : ANSWER ONLY FOUR QUESTIONS
- : EACH QUESTION CARRIES 25 MARKS
- : QUESTIONS ONE AND TWO ARE COMPULSARY
- : NO QUESTION PAPER SHOULD BE BROUGHT INTO THE EXAMINATION ROOM
- : BEGIN EACH QUESTION ON A NEW PAGE

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

QUESTION ONE

Curitiba is considered a model of sustainable cities. Describe what the people of Curitiba have done in order for the city to be called a “sustainable city”. What lessons can Swaziland borrow from it?

Total 25 marks

QUESTION TWO

1. In recent years in Swaziland, like in other developing countries, people migrate to urban areas in pursuit for better living conditions. Discuss
 - a. The push factors that lead to people migrating from the rural areas to the urban areas. (5 marks).
 - b. The pull factors that lead to people migrating from the rural areas to the urban areas. (5 marks).
2. Explain the principles of
 - a. Smart growth. (5 marks).
 - b. Garden cities. (5 marks).
 - c. Conservation designs. (5 marks).

Total 25 marks

QUESTION THREE

Three characteristics of a population are the birth rate, growth rate, and death rate. Elaborate on how each has been affected by

- a. Modern medicine. (8 marks).
- b. Modern agriculture. (8 marks).
- c. Modern industry. (9 marks).

Total 25 marks

QUESTION FOUR

1. In detail explain what is meant by the term biodiversity. (5 marks).
2. Why do people value biodiversity? (8 marks).
3. Discuss the factors that
 - a. Increase biodiversity. (6 marks).
 - b. Decrease biodiversity. (6 marks).

Total 25 marks

QUESTION FIVE

Swaziland has been invaded by several exotic species. One of these species that has been declared a national disaster by His Royal Highness King Mswati III is *Cromolena odorata* (Sandanezwe). You have been appointed as a consultant to eradicate this alien species from the country and restore the Swazi ecosystems to their original state. Describe how you will undertake this task.

Total 25 marks