



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences
Department of Environmental Health Science

DEGREE IN ENVIRONMENTAL HEALTH SCIENCES
FINAL EXAMINATION PAPER 2016

TITLE OF PAPER : ENVIRONMENTAL ECOLOGY II
COURSE CODE : EHS556
DURATION : 2 HOURS
MARKS : 100

INSTRUCTIONS : READ THE QUESTIONS & INSTRUCTIONS CAREFULLY
: ANSWER **ANY FOUR** QUESTIONS
: EACH QUESTION **CARRIES 25** MARKS.
: WRITE NEATLY & CLEARLY
: NO PAPER SHOULD BE BROUGHT INTO THE EXAMINATION ROOM.
: 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. In detail, explain what is meant by the term biodiversity. [5]
2. Why do people value biodiversity? [8]
3. Discuss the factors that
 - a. Increase biodiversity. [6]
 - b. Decrease biodiversity. [6]

Total 25 marks

QUESTION TWO

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

1. Modern medicine. [8]
2. Modern agriculture. [8]
3. Modern industry. [9]

Total 25 marks

QUESTION THREE

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

Total 25 marks

QUESTION FOUR

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

Total 25 marks

QUESTION FIVE

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