

UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DEGREE IN ENVIRONMENTAL HEALTH SCIENCE

SUPPLEMENTARY EXAMINATION PAPER 2013

TITLE OF PAPER : **INTRODUCTION TO AIR POLLUTION HEALTH**

COURSE CODE : **EHS 314**

DURATION : **2 HOURS**

MARKS : **100 MARK**

INSTRUCTIONS : **READ THE QUESTIONS & INSTRUCTIONS CAREFULLY**

: **ANSWER ANY FOUR QUESTIONS**

: **EACH QUESTION CARRIES 25 MARKS**

: **WRITE NEATLY & CLEARLY**

: **NO PAPER SHOULD BE BROUGHT INTO NOR OUT OF 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 1

- a) Name 3 anthropogenic activities that have contributed to the changes in climate change over the past decade or so (6)
- b) Differentiate emission factors as they relate to stationary and mobile sources (10)
- c) What do you understand by an environmental footprint? (4)
- d) Why is it difficult to control secondary pollutants as opposed to controlling primary pollutants? (5)

QUESTION 2

- a) List the factors that are taken into account when undertaking air pollution modeling (10)
- b) Air pollution models are designed to answer 3 basic questions. Outline and discuss these 3 questions (15)

QUESTION 3

- a) Acid rain is a concern both to the general public and environmentalists. Why is it so? (6).
- b) Discuss the Pollution Prevention Programme (10).
- c) Pollutants either fall as wet or dry deposition elaborate on this point and give examples where applicable (9).

QUESTION 4

- a) Compare and contrast what is meant by the following: Environmental justice and Environmental Racism (10)
- b) Define the following terms (10)
 - i. Biogenic pollutants
 - ii. An area source of pollution
 - iii. Line source
 - iv. Ozone Depletion
 - v. Emission Inventory
- c) Discuss the principles of Environmental Justice (5)

QUESTION 5

- a) According to the Swaziland Air Pollution Control Act, 2000, an emission is said to be significant if it meets 2 criteria. Outline these criteria (4)
- b) The Swaziland Air Pollution Control Act, 2000 can permit an industry to emit dark smoke; under what conditions can this be allowed? (4)
- c) Outline the 5 assumptions of the Gaussian Dispersion Model (10)
- d) What are the 6 criteria pollutants and why are they of concern to environmentalists? (7)