



**UNIVERSITY OF SWAZILAND**  
Faculty of Health Science

Department of Environmental Health  
Sciences

**Supplementary Examination 2010**

Title of paper: Introduction to Air Pollution

Course code: EHS 314

Time allowed: 2 hours

Marks allocation: 100 Marks

**Instructions:**

- 1) Read the questions and instructions carefully
- 2) Answer Four (4) questions
- 3) Each question is weighted 25 marks
- 4) Write neatly and clearly
- 5) Begin each question on a separate sheet of paper

This paper is not to be opened until the invigilator has granted  
permission

### **QUESTION 1**

- a) What do you understand by the term, Polluter Pays Principle? (5)
- b) Discuss Air Pollution control measures that can be undertaken by individuals (6)
- c) Mention and briefly discuss 7 air pollution effects that are attributed to economic losses (14)

### **QUESTION 2**

- a) Name the components of an Air Quality Management (9)
- b) Define the following terms. (14)
  - Stationery sources
  - Mobile sources
  - Line sources
  - Area sources
  - Point sources
  - Primary pollutants
  - Secondary pollutants
- c) What is the pollutant that is exclusively a secondary air pollutant and contributes to smog formation? (2)

### **QUESTION 3**

- a) List 10 health effects associated with ozone. (10)
- b) Selection of an air quality model depends on 3 parameters, what are they? (6)
- c) What influences atmospheric dispersion of air pollutants? (3)
- d) Models are used to answer 3 main questions, what are these questions (6)

### **QUESTION 4**

- a) What specific information is needed in modeling air pollution transport and dispersion? (8)
- b) Why is it difficult to control secondary pollutants as opposed to primary ones? (6)
- c) Differentiate between global warming and the greenhouse effect (10)
- d) What is the other name for winter smog? (1)

### **QUESTION 5**

- a) An emission is said to be significant if it meets 2 criterions, name them? (4)
- b) Differentiate between PM<sub>10</sub> and PM<sub>2.5</sub> (6).

- c) According to the SD Air Pollution Regulations, when is it permitted to emit dark smoke? (4)**
- d) What are the 5 basic approaches to controlling indoor air pollutants? (10).**
- e) Name any one factor that aggravates indoor pollution? (1)**