



**UNIVERSITY OF SWAZILAND**  
Faculty of Health Science

Department of Environmental Health  
Sciences

Final Examination 2009

Title of paper: AIR SAMPLING AND ANALYSIS

Course code: EHS 565

Time allowed: 2 hours

Marks allocation: 100 Marks

Instructions:

- 1) Read the questions and instructions carefully
- 2) Answer Four questions
- 3) Each question is weighted 25 marks
- 4) Write neatly and clearly

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

**EHS 565 FINAL EXAM, 2009  
AIR SAMPLING AND ANALYSIS**

**QUESTION 1**

- a) Discuss the 3 basic strategies to improve indoor air quality [15]
- b) Name 3 types of air cleaners [3]
- c) What is a volatile organic compound? [2]
- d) Define a toxic substance and give 3 examples of such? [5]

**Question 2**

- a) What is an air contaminant [2]
- b) List the 6 criteria air pollutant [6]
- c) What is the difference between a toxic and a hazardous substance? [5]
- d) Ozone can either be defined as good or bad ozone. Explain this statement [10].
- e) What is an ozone precursor? [3].

**Question 3**

- a) Sampling is divided into categories, what are they and give a brief discussion of each. [16]
- b) Selection of equipment for air analysis is dependent on some considerations. Just mention 5 of these considerations. [5]
- c) What 4 sampling errors that may occur during air sampling? [4]

**Question 4**

- a) When is it ideal to carry out sampling [5]
- b) Where do we sample for air contaminants? [3]
- c) In biological monitoring what are key issues to consider? [5]
- d) Mention 6 health effects associated with Nitrogen Oxide [6]
- e) Once an air sampling exercise has revealed that there is air contamination in the workplace, what measures can one put in place to avert such? [6]

**QUESTION 5**

Out of the hosts of air contaminants in the environment, children and the elderly are more vulnerable to pollution, why is so? [25].