



UNIVERSITY OF SWAZILAND
FACULTY OF HEALTH SCIENCE
DEPARTMENT OF ENVIRONMENTAL HEALTH SCIENCES
SUPPLEMENTARY EXAMINATION JULY, 2014

Title of paper: AIR SAMPLING AND ANALYSIS I

Course code: EHS 564

Time allowed: 2 HOURS

Marks allocation: 100 Marks

Instructions:

- 1) Answer ANY FOUR (4) questions**
- 2) Each question is weighted 25 marks**
- 3) Write neatly and clearly**
- 4) Begin each question in a separate sheet of paper**

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

QUESTION 1

- a) What is air sampling and what is its purpose? [5]
- b) Give 5 characteristics of gases as air pollutants [5]
- c) Enumerate components of an air sampling train [4]
- d) What is a particulate matter and give an example thereof? [5]
- e) Mention the 3 types of devices used in passive sampling [6]

QUESTION 2

In grab air sampling of gases and vapor one needs to have different devices, briefly mention and discuss each component [25]

QUESTION 3

- a) You are a safety officer for Nqolose Consortium and are approached to carry out hazard recognition. Briefly mention and discuss the 6 elements that you will look for [20]
- b) Mention 5 issues that you would consider if you are carrying out a walk through or field survey [5]

QUESTION 4

- a) List 5 types of health surveillance in air sampling survey [10]
- b) Just mention 2 health effects that can be caused by each of the 6 criteria air pollutants [12]
- c) What type of method is used by detector tubes in air analysis? [3]

QUESTION 5

Why is it important that air pollutants be identified, minimized, controlled and monitored? [25]