



**UNIVERSITY OF SWAZILAND**  
**Faculty of Health Science**

**Department of Environmental Health  
Sciences**

**Main Examination 2011**

**Title of paper: AIR SAMPLING AND ANALYSIS 11**

**Course code: EHS 565**

**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) There is a fire outbreak at the Faculty of Health Sciences and you are the SHEQ officer there. Regarding fire evacuation, what should be taken into account with regards to routes and exits? (10)**
- b) What do you understand as the fundamental differences between the qualitative and quantitative fit tests? (4)**
- c) Define a fit factor as it relates to fit testing of Respiratory Protective Equipment (4)**
- d) Chronologically describe how a quantitative fit test is carried out, EXCLUDING the exercises that are supposed to be carried out by the subject (7)**

### **QUESTION 2**

- a) Compare and contrast between Self Contained Breathing Apparatus and Supplied Air Ventilators (15)**
- b) Define the following terms (10)**
  - i. Demand respirator**
  - ii. Escape only respirator**
  - iii. Positive pressure respirator**
  - iv. User seal check**
  - v. Canister/cartridge**

### **QUESTION 3**

- a) Briefly discuss the issues that should be taken into account under health surveillance medical confidentiality (10)**
- b) Concisely write on what the OHS officer should do on both IDLH and non IDLH atmospheres (15)**