

UNIVERSITY OF SWAZILAND
Faculty of Health Science

Department of Environmental Health Sciences

Final Examination 2011/2012

Title of paper: Risk Assessment, Management and Communication I

Course code: EHS 567

Time allowed: 2 hours

Marks allocation: 100 Marks

Instructions:

- 1) Read the questions and instructions carefully
- 2) Answer ALL 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

Answer ALL questions

Question 1

- a) Define risk assessment and its importance at the workplace. [5 Marks]
- b) In risk assessment and management there are two important measures to be in place and working at all times. Outline two measures and their importance in an organization. [20 Marks]

Question 2

Define the following terms:

- a) Incident and Accident [3 Marks]
- b) Workplace [3 Marks]
- c) Occupational health and safety [3 Marks]
- d) Health and safety auditing [3 Marks]
- e) Characteristics of a task [3 Marks]
- f) Hazard identification [5 Marks]
- g) Task Analysis [5 Marks]

Question 3

- a) Tasks analysis is essential in identifying hazards in a system, before commissioning and at decommissioning. Outline the areas addressed by task analysis. [18 Marks]
- b) Define the life cycle of a system. [7 Marks]

Question 4

Discuss the following scientific methods of risk assessment:

- a) Fault Tree Analysis (FTA)
 - b) Hazard Operability (HAZOP)
 - c) Preliminary hazard analysis (PHA)
 - d) Failure Mode Effect Analysis (FMEA)
 - e) Job safety analysis (JSA)
- [25 Marks]