

UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DEGREE IN ENVIRONMENTAL HEALTH SCIENCE

SUPPLEMENTARY EXAMINATION PAPER 2013

TITLE OF PAPER : **PRINCIPLES OF OCCUPATIONAL SAFETY AND HEALTH**

COURSE CODE : **EHM 211**

DURATION : **2 HOURS**

MARKS : **100 MARK**

INSTRUCTIONS : **READ THE QUESTIONS & INSTRUCTIONS CAREFULLY**

: **ANSWER ANY FOUR QUESTIONS**

: **EACH QUESTION CARRIES 25 MARKS**

: **WRITE NEATLY & CLEARLY**

: **NO PAPER SHOULD BE BROUGHT INTO NOR OUT OF THE EXAMINATION ROOM**

: **BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER**

DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR

Question 1

- a) Outline the hazards that might be encountered by a gardener employed by a local authority parks department. **(5 marks)**
- b) Outline the five (5) main categories of guards and safe-guarding devices that may be used to minimize the risk of contact with dangerous parts of machinery. **(5 marks)**
- c) Explain why personal protective equipment (PPE) should be considered as a last resort in the control of occupational health hazards. **(5marks)**
- d) List five (5) respiratory diseases that could be caused by exposure to dust at work. **(5marks)**
- e) Identify the measures to be taken to prevent slip and trip hazards in an engineering workshop. **(5marks)**

(Total =25 marks)

Question 2

Industrial Hygiene is that science and art which is devoted to **anticipation, recognition, evaluation and control** of those environmental factors or stresses arising from the workplace. Briefly discuss each of these principles in this field of study

(25 marks)

Question 3

Basic policies of substitution, enclosure of process, controlled exposure, and personal protection are important in control of chemical hazards. Discuss these principles in detail and give appropriate examples of each.

(25 marks)

Question 4

What is meant by occupational hygiene?

(4marks)

- a) Who is considered the father of occupational medicine? Briefly discuss his contribution to occupational medicine. (4marks)
- b) List ten (10) items that are listed in a material safety data sheet (MSDS). (10marks)
- c) Describe what is an occupational health hazard (3marks)
- d) Explain the difference between toxicity and hazard. (4marks)

(Total = 25marks)

Question 5

- a) Air contains 400 ppm of acetone (TLV, 750ppm) 150 ppm of butyl acetate (TLV, 200 ppm) and 100 ppm of methyl ethyl ketone (TLV, 200 ppm) . What is the TV?
Comment on your answer. (5 marks)
- b) What is meant by acclimation (3 marks)
- c) Name four (4) environmental stresses frequently encountered in the work environment. (4 marks)
- d) In radioactivity how would you differentiate between alpha particles, beta radiation and neutrons? (6 marks)
- e) What is the difference between a mutagen and a teratogen? (4 marks)
- f) What is the difference between irritant contact dermatitis and allergic contact dermatitis, irritant (3 marks)

(Total = 25 marks)