

UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

Department of Environmental Health Science

Final Examination
2014

Title of paper: Industrial Hygiene Aspect of Plant Operation II

Course code: EHS 563

Time allowed: 2 hours

Marks allocation: 100 Marks

Instructions:

- 1) Read the questions and instructions carefully
- 2) Answer any 4 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 4 questions**Question 1**

In bank X, the purchasing officer out of ignorance bought all types of fire extinguishers and positioned them in most of the building walls. As a safety officer you notice that some extinguishers were not needed because of the type of fires a bank can have and some were not placed in good positions.

Alert management on the:

- a) Types of fires the bank can have. [5 Marks]
- b) Types of extinguishers that the bank ought to have. [5 Marks]
- c) Preventive and Reactive measures to be in place in case of fire outbreak in the bank. [15 Marks]

Question 2

As a safety officer what would be your advice to management on how to manage noise exposure at the workplace?

[25 Marks]

Question 3

- a) What is radiation? [1 Mark]
- b) What is the difference between ionizing and non-ionizing radiation? [8 Marks]
- c) Choose any two types of ionising radiation particles or waves. Explain how they are harmful to human health. [8 Marks]
- d) Explain how non-ionizing radiation may be harmful to human health. [8 Marks]

Question 4

- a) What is vibration? [1 Marks]
- b) Define the two types of vibration and name types of activities that expose workers to such vibration [8 Marks]
- c) Outline the adverse effects of vibration to the health and safety of the worker. [10 Marks]
- d) In vibration, what increases the risk of ailment to the worker? [6 Marks]

Question 5

Employees complain of eye strains and related illnesses. As a safety officer explain the factors to consider when specifying the lighting system in the factory for the safety and visual comfort of the workers.

[25 Marks]