



UNIVERSITY OF SWAZILAND

Faculty of Health Science

Department of Environmental Health
Sciences

Final Examination 2005

Title of paper: Industrial hygiene aspect of plant operation

Course code: EHS 531

Time allowed: 3 hours

Marks allocation: 100 Marks

Instructions:

- 1) Read the questions and instructions carefully
- 2) Answer Five questions
- 3) Each question is weighted 20 marks
- 4) Write neatly and clearly

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

EHS 531
FINAL EXAMINATION
YEAR 2004/2005

Question 1

a) Our company is expanding, constructing new structures. Management is engaging outside contractors.

One day there was an accident emanating from the contractor's activities, contractor workers and company workers were injured. In an investigation, it transpired that the contractor did not have a safety program.

In the law who has violated the provisions of the Occupational safety and Health Act 2001? Explain.

[10 Marks]

b) What are the health and safety effects of noise at the workplace?

[4 Marks]

c) Explain a program would you put in place to protect workers?

[6 Marks]

Question 2

In a certain banking institution the purchasing officer, out of ignorance bought all types of 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 the company can have and some were not placed in good positions.

Alert management on the:

- types of fires the company can have and
- extinguishers

that the **company ought to have** explaining their advantages

- Reactive measures to be in place in case of fire.

[20 Marks]

Question 3

Explain the different types of mechanical and non-mechanical hazards that can have adverse effects on the safety and health of the workers in a livestock farm.

[20 Marks]

Question 4

There are certain occupations that expose workers to vibration. Explain the types of vibrations and the adverse health effects of them to the worker.

[20 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.

[20 Marks]

Question 6

In relation to thermal environment explain the following:

a) Health effects of heat and cold

[8 Marks]

b) Mean radiant temperature

[4 Marks]

c) Describe measures you would recommend to protect workers who are working in very cold and very hot conditions

[8 Marks]