



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DIPLOMA IN ENVIRONMENTAL HEALTH

FINAL EXAMINATION PAPER 2007/2008

TITLE OF PAPER	:	OCCUPATIONAL HEALTH
COURSE CODE	:	EHS 315
DURATION	:	2 HOURS
MARKS	:	100
INSTRUCTIONS	:	READ THE QUESTIONS & INSTRUCTIONS CAREFULLY
	:	ANSWER ANY FOUR (4) 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

Occupational Health and Safety - Examination 2008

Question 1

- a) In the workplace machinery can either produce mechanical or non-mechanical dangers not only to the operatives but also to the people nearby. Briefly discuss this statement. Your answer should site at least four (4) examples of mechanical dangers and at least ten (10) examples of non-mechanical dangers.

(15marks)

- b) Critically examine the types of injuries that can be inflicted by an unguarded abrasive wheel in the workplace

(5marks)

- c) Name five (5) types of machine guards that are used in the workplace.

(5marks)

Question 2.

TOTAL = 25 Marks

- a) Define the following and indicate their importance in occupational hygiene.

- TLV-C
- IDLH
- PEL
- TWA
- TLV

(15marks)

- b) What is a material safety data sheet? List 10 items covered on the typical MSDS.

(10marks)

TOTAL 25 Marks

Question 3 .

- a) The protection against chemical hazards is a specialized field of activity in its own right. The promotion of safety rest on the basic policies of substitution, enclosure of process, controlled exposure, and personal protection. Discuss these principles in detail and give appropriate examples on each.

(20marks)

- b) What is the difference between a mutagen and a teratogen (3marks)

- c) What is meant by LD₅₀

(2marks)

(Total = 25marks)

Question 4.

- i) What are the four (4) components of industrial hygiene

(4 marks)

- ii) What are the components of a workplace health and safety risk management?

(11 marks)

- iii) What are the components of the Day Light Factor (3 marks)
- iv) Clearly explain how you would determine the moisture content or humidity when undertaking environmental measurement (5 marks)
- v) What is meant by tripartite in the Occupational Health and Safety Act 2000 (2 marks)

TOTAL = 25 MARKS

Question 5.

- A. What is meant by:
 - i) Acoustic impedance. (2 marks)
 - ii) The decibel. (2 marks)
- B. What determines the following characteristics of sound?
 - i) Pitch
 - ii) Loudness
 - iii) Quality (or timbre)

(6marks)
- C. What is;
 - i) Sound Power Level (SWL) (3marks)
 - ii) Sound Pressure Level (SPL) (3marks)
 - iii) Two sound sources are operating together. One source alone would produce 78dB and the other 70dB. Calculate from the first principle the overall SPL. (6marks)
 - iv) Name two (2) physiological and two (1) psychological effects of noise. (3marks)

(Total = 25marks)