

**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**FACULTY OF APPLIED SCIENCES**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE AND HEALTH**

**OCCUPATIONAL HEALTH AND SAFETY: ESH 2208**

**May 2012**

**Time Allowed: 3 hours**

**Total Marks: 100**

**INSTRUCTIONS:**

**Answer any FOUR questions. Each question carries 25 marks.**

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**Question 1**

- a) Outline the main difference between irritant contact dermatitis and allergic contact dermatitis. (5 marks)
- b) A grinding mill which employs seven workers has two grinding machines and one dehulling machine installed at its premises. During a noise survey, you establish that the machines produce the following noise levels:-
- Grinding machine 1 94dB  
Grinding machine 2 101dB  
Dehulling machine 96dB
- i) If all machines were to run at the same time, what would be the resultant total noise levels operators would be exposed to? (5 marks)
- ii) Design a Hearing Conservation Program you could use to manage the noise hazard at this workplace. (15 marks)

**Question 2**

- a) Explain the key functions of Occupational Health Services as enshrined in Convection 161. (13 marks)
- b) Explain the Organisation of Health and Safety in Zimbabwe (12 marks)

**Question 3**

- a) Discuss Frank Bird's Accident Causation Theory in the context of Accident prevention.

**Question 4**

- a) Describe the occupational hazards that an office secretary might be exposed to at her work station. (10 marks)
- b) What control measures would you recommend to alleviate the identified hazards. (15 marks)

**Question 5**

As a safety Officer at a company that has been experiencing frequent serious accidents, you have been tasked to come up with a Work Safety Analysis (WSA). Discuss the steps you will take to complete the task.

**Question 6**

Health and Safety Inspections and accident investigations are proactive and reactive systems respectively. Discuss the advantages and disadvantages of both systems and state how you would use these systems at your workplace.

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**OCCUPATIONAL HEALTH AND SAFETY: ESH 2208  
SUPPLEMENTARY EXAMINATIONS**

**July 2012**

**Time Allowed: 3 hours**

**Total Marks: 100**

**INSTRUCTIONS:**

**Answer any FOUR questions. Each question carries 25 marks.**

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**Question 1**

a) Write short notes on the following;

- i) The basis for occupational hygiene (5 marks)
- ii) Functions of an industrial hygienist (5 marks)

b) State the main functions of each of the following in Occupational Health and Safety:-

- i) OSH Promotions (5 marks)
- ii) OSH Inspectorate (5 marks)
- iii) Safety Representative (5 marks)

**Question 2**

Discuss in detail epidemiological strategies that can be used to investigate occupational health cases in the workplace.

**Question 3**

- a) As a Safety Officer discuss how you would come up with a PPE/C procurement programme in your organisation. (15 marks)
- b) In accident Prevention PPE/C is the last line of defence. Discuss. (10 marks)

**Question 4**

- a) Outline the obligations of an employer under the 3<sup>rd</sup> schedule of SI 68 of 1990. (10 marks)
- b) Discuss tripartitism in the management of Occupational Health and Safety (15 marks)

**Question 5**

Describe in detail how you would conduct a workplace risk assessment.

**Question 6**

Discuss in detail effects of exposure to noise in the workplace.