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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2023/2024**

- COURSE NAME : PLANT AND CONSTRUCTION SAFETY
- COURSE CODE : BNS 20603
- PROGRAMME CODE : BNS
- EXAMINATION DATE : JULY 2024
- DURATION : 3 HOURS
- INSTRUCTIONS :
1. ANSWER ALL QUESTIONS
 2. THIS FINAL EXAMINATION IS CONDUCTED VIA
 - Open book
 - Closed book
 3. STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

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Q1 Management plays a crucial role in maintaining compliance with health and safety regulations and standards in the workplace. It is the responsibility of management to set the tone for a culture of safety and to ensure that all employees understand and follow safety protocols.

(a) Describe **FIVE (5)** general duties of an employer to provide a safe working environment at the workplace.

(5 marks)

(b) Differentiate **FIVE (5)** safety and health requirements between the Site Safety Supervisor (SSS) and Contractor Safety Supervisor (CSS).

(10 marks)

(c) An accident has occurred during excavation work. According to Occupational Safety and Health Act 1994 (OSHA 1994), Regulation 13 (Part 3), Safety & Health Committee (SHC) should carry out an accident investigation to provide a complete report, focusing on control measure to prevent this incident from happen again in a future.

Explain **FIVE (5)** purposes of accident investigation to prevent accident occur in a future.

(10 marks)

Q2 Construction is an often hazardous, predominantly land-based activity where site workers may be exposed to various risks.

(a) Differentiate the risks of heat exhaustion and heat stroke when working during hot weather conditions, based on:

- (i) Causes
- (ii) Body temperature
- (iii) Severity
- (iv) Symptoms
- (v) Treatment approach

(10 marks)

(b) Safety and wellbeing of workers must be safeguard against hazards. Work should be carried out in a safe manner, including building construction workplace. Referring to the picture illustrated in **Figure APPENDIX A.1**;

(i) Identify **FIVE (5)** physical hazards occur at workplace.

(5 marks)

(ii) Recommend **ONE (1)** control measures for each physical hazards found based on your answer in **Question 2 (b) (i)** and state the categorization of the recommended control measures based on hierarchy of control in OSHA 1994.

(10 marks)

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Q3 Working in a confined space can expose a person to a very risky situation that can cause diseases and injury which leads to an accident and death.

(a) Determine **FIVE (5)** examples of confined space in workplace.
(5 marks)

(b) Ventilation in confined spaces serves several critical purposes, such as ensuring the safety of workers and preventing hazardous conditions. Therefore, construct **TEN (10)** general procedures during confined space work.
(10 marks)

(c) Identify **FIVE (5)** potential sources of toxic gases.
(10 marks)

Q4 Personal protective equipment (PPE) is used for protection of workers from injuries or illness whenever there is a release of hazard at workplace.

(a) Determine **FIVE (5)** roles and responsibility of PPE users.
(5 marks)

(b) Head protection is designed to protect worker from the risk of falling object or strike worker head against a fixed object. Therefore, examine **FIVE (5)** maintenance procedure for head protection.
(5 marks)

(c) Differentiate the benefits of using either ear plug or ear muff as Personal Hearing Protection (PHP), by providing **FIVE (5)** benefits for each of this PHP equipment.
(10 marks)

(d) Safety precautions should be very important for worker when their working at workplace. You as a safety manager must provide a control measure when there has chemical hazardous to health occur at workplace.

Therefore, recommend **FIVE (5)** control measure by referring Regulation 15 (1), to avoid the incident of chemical hazardous to health occur in a future.

(5 marks)

- END OF QUESTIONS -

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APPENDIX A

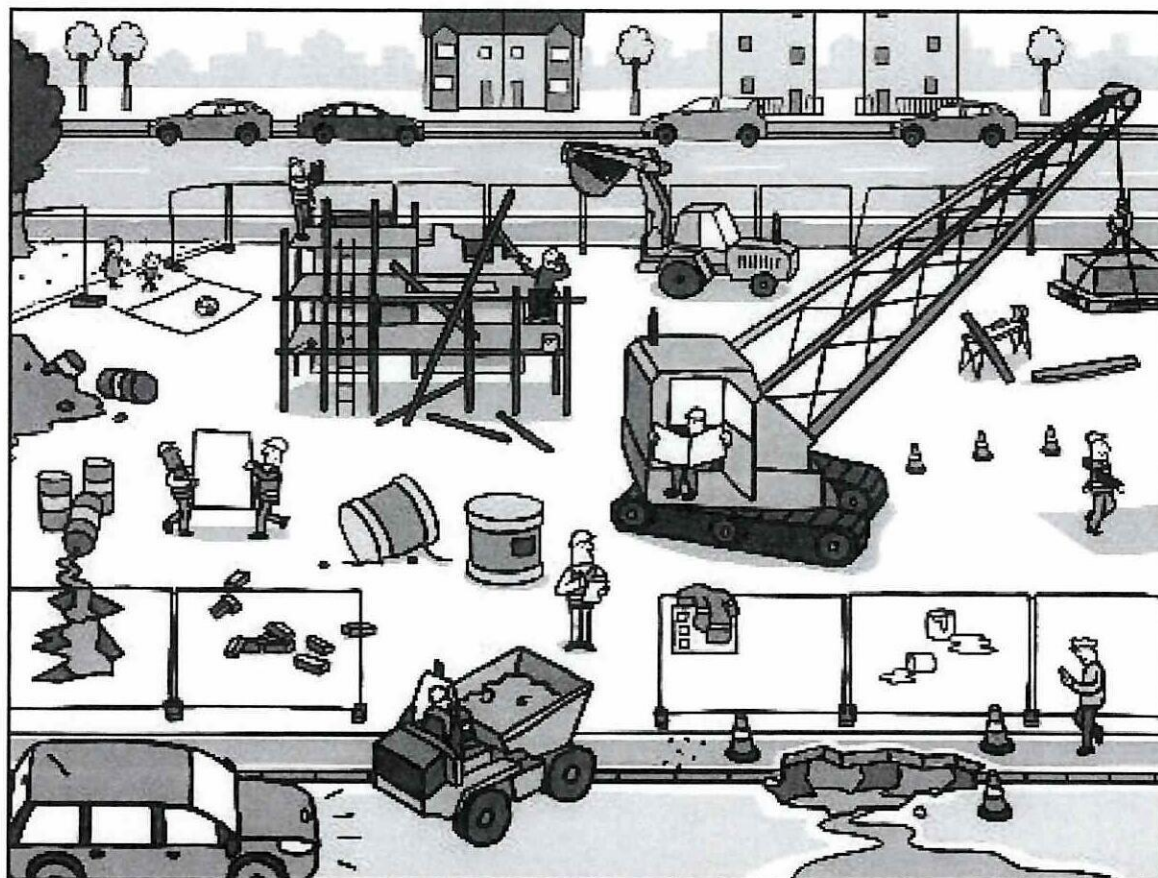


Figure APPENDIX A.1 Work activity at construction site

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