



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION  
SEMESTER II  
SESSION 2023/2024

- COURSE NAME : OCCUPATIONAL SAFETY AND HEALTH
- COURSE CODE : BFR 33002
- PROGRAMME CODE : BFR
- EXAMINATION DATE : JULY 2024
- DURATION : 2 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 **THREE (3)** PAGES

- Q1** Occupational Safety and Health (OSH) is a cross-disciplinary area concerned with protecting the safety, health, and welfare of people engaged in work or employment.
- (a) In OSH, there are some terms being used such as ALARP and HIRARC. State the following abbreviations.
- (i) ALARP. (3 marks)
- (i) HIRARC. (3 marks)
- (b) Explain **THREE (3)** importances of the OSH implementation at the workplace. (7 marks)
- (c) List **SIX (6)** classifications of hazards and give an example of potential sources of hazards from each classification. (12 marks)
- Q2** (a) Define Hazards. (3 marks)
- (b) Discuss **FIVE (5)** sources of hazard. (10 marks)
- (c) In order to control the hazard, recommendations shall be provided according to the hierarchies of the control measures. Explain briefly in table, **SIX (6)** of the control measure hierarchies. (12 marks)
- Q3** (a) List **FOUR (4)** basic types of Incidents. (2 marks)
- (b) Describe 'near miss' with an example. (5 marks)
- (c) According to DOSH, every incident that happened should be followed by an investigation. Discuss the investigation that must be conducted. (8 marks)
- (d) Discuss the investigation strategies in sequence to perform the task efficiently. (10 marks)

Q4 Figure Q4.1 shows the accident that happened to the subcontractor and workers. To ensure work activities are carried out safely and healthily, potential hazards need to be identified, assessed, and controlled.

# Sub-contractor, worker found dead in manhole

**SHAH ALAM.**

A subcontractor and his worker were found dead in a five-meters deep manhole along Persiaran Kemajuan in Section 16 here today.

Lim Chin Chuan, 51, from Taman Camp, Port Klang and his worker identified only as Masturi, 24, from Jawa Timur, were believed to have died in toxic inhalation.

Firemen who went to the scene after receiving a call at 10.56am found Lim's body on top of his assistant in the manhole. They also found a ladder jutting out of the manhole. Section 15 Fire and Rescue Department officer Borhan Madom said the two might have inhaled toxic gas on Friday while carrying out maintenance work.

The 13-member team pulled out Lim's body from the manhole about 1.25pm and Masturi's body was retrieved 20 minutes later.



**SUSPECTED TOXIC GAS: Firemen pulling out one of the bodies.**

The position of the bodies indicated that one of the two could have sought the help of the other after inhaling toxic gas in the manhole. A car believed to have been driven by the sub-contractor was parked nearby. The scene attracted a large crowd, causing a traffic jam in the industrial area. According to one of Lim's relatives, Lim normally left the house about 7am and returned home about 6pm. However, relatives were unable to trace Lim's whereabouts until this morning. They lodged a report at the Pandamaran police station about 10am. The bodies were sent to University Malaya Medical Centre for post-mortem.

**Figure Q4.1** Newspaper cutting of an accident happened to the subcontractor and worker in manhole.

- (a) Analyse the statement from the **Figure Q4.1** and propose HIRARC to ensure the hazard is as ALARP.

(25 marks)

**TERBUKA**

- END OF QUESTIONS -