



UNIVERSITI KUALA LUMPUR
MALAYSIAN INSTITUTE OF CHEMICAL AND BIO-ENGINEERING TECHNOLOGY

FINAL EXAMINATION
OCTOBER 2025 SEMESTER

COURSE CODE : CLD20002
COURSE TITLE : OCCUPATIONAL SAFETY AND HEALTH
PROGRAMME NAME : DIPLOMA IN CHEMICAL ENGINEERING TECHNOLOGY (FOOD)
DATE : 03 FEBRUARY 2026
TIME : 2:00PM - 4:00PM
DURATION : 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. Please read the instructions given in the question paper CAREFULLY.
2. This question paper is printed on both sides of the paper.
3. This question paper consist of TWO sections.
4. Section A consist total of 60 marks. Answer ALL questions.
5. Section B consist of three questions. Answer TWO (2) questions only.
6. Please write your answer on the answer booklet provided.
7. Please answer all questions in English only.
8. Refer to the attached Formula/ Appendies. ☐ *Tick if applicable*

THERE ARE 6 PAGES OF QUESTIONS INCLUDING THIS PAGE

SECTION A (Total: 60 marks)

Answer ALL questions.

Please use the answer booklet provided.

Question 1

Risk assessment is an increasingly popular tool for analyzing workplace hazards.

- (a) Clarify the meaning of hazard and risk.
(4 marks)
- (b) Identify the first step in performing a risk assessment.
(2 marks)
- (c) Discuss 4 (four) types of injury that may be caused by the incorrect manual handling of loads.
(4 marks)
- (d) Describe 5 (five) hazards that could be encountered by a technologist employed by a food factory.
(10 marks)

Question 2

Hazard identification is the crucial step in risk management.

- (a) Describe the ergonomic hazard.
(2 marks)
- (b) Identify the method that is the MOST commonly used for hazard identification.
(2 marks)
- (c) Discuss the four (4) steps involved in hazard identification process with example.
(8 marks)
- (d) Referring to (c), discuss four (4) importances of this hazard identification process in workplace.
(8 marks)

Question 3

Industrial safety refers to the systematic application of principles, procedures, and practices designed to prevent accidents, injuries, occupational diseases, and damage to property in industrial workplaces such as factories, plants, workshops, and construction sites.

- (a) Identify 5 (five) importance of industrial safety.
(5 marks)
- (b) Clarify 5 (five) accident prevention methods.
(5 marks)
- (c) Discuss in details the hierarchy of controls.
(10 marks)

SECTION B (Total: 40 marks)

Answer TWO (2) questions only.

Please use the answer booklet provided.

Question 1

Chemical Safety is achieved by undertaking all activities involving chemicals in such a way as to ensure the safety of human health and the environment.

- (a) Carry out the importance of chemical safety in industrial and laboratory environments and include examples of accidents that may occur due to poor chemical safety practices.

(10 marks)

- (b) Interpret five (5) safe practices when handling hazardous chemicals.

(10 marks)

Question 2

A laboratory technician accidentally spills concentrated acid on the bench. The area is poorly ventilated, and the technician is not wearing gloves.

- (a) Find five (5) chemical safety hazards in the scenario.

(5 marks)

- (b) Interpret the possible health effects of each hazard.

(5 marks)

- (c) Relate suitable control measures for each hazard.

(5 marks)

- (d) Discover five (5) purpose of chemical labeling.

(5 marks)

Question 3

A Safe Work Permit is a formal written authorization that allows specific high-risk work activities to be carried out under controlled conditions. Lockout and Tagout (LOTO) is a critical safety procedure that ensures hazardous energy is properly controlled, protecting workers during maintenance and servicing activities.

- (a) Discover five (5) types of work requiring a safe work permit.
(5 marks)
- (b) Interpret five (5) key elements of a safe work permit.
(5 marks)
- (c) Discover the difference between Lockout and Tagout (LOTO).
(5 marks)
- (d) Relate five (5) types of hazardous energy controlled by Lockout and Tagout (LOTO).
(5 marks)

END OF EXAMINATION PAPER