UNIVERSITI KUALA LUMPUR
INSTITUTE OF MEDICAL SCIENCE TECHNOLOGY

FINAL EXAMINATION

OCTOBER 2025 SEMESTER

COURSE CODE	:	HRB20803
COURSE TITLE	:	MACHINERY SAFETY
PROGRAMME NAME	:	BACHELOR OF OCCUPATIONAL SAFETY & HEALTH (HONOURS)
DATE	:	28 JANUARY 2026
TIME	:	9:00AM - 12:00PM
DURATION	:	3 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 ONE sections.
4. Section A consist of five questions. Answer FOUR (4) questions only.
5. Please write your answer on the answer booklet provided.
6. Please answer all questions in English only.
7. Refer to the attached Formula/ Appendies. ☐ *Tick if applicable*

THERE ARE 8 PAGES OF QUESTIONS INCLUDING THIS PAGE

SECTION A (Total: 100 marks)

Answer FOUR (4) questions.

Please use the answer booklet provided.

Question 1

Identifying workplace hazards is vital to upholding employee safety, managing risks, and establishing effective preventive measures for a secure work environment. For instance, choosing appropriate tools for a job, controlling fire hazards, and ensuring safe emergency egress are paramount.

(a) Explain the importance of selecting the right tools for the job.

(10 marks)

(b) Illustrate the hierarchy of controls and provide ONE (1) example for each level hierarchy of control-to-control fire hazards in the office setting.

(10 marks)

(c) Egress that has been properly designed offers a safe path to escape a fire or other emergency. Provide FIVE (5) essential tips for safe emergency egress.

(5 marks)

Question 2

The Industry Code of Practice for Safe Working in Confined Spaces 2010 provides employers with essential information to ensure that employees working in such confined spaces can perform their work safely.

(a) Define confined space.

(5 marks)

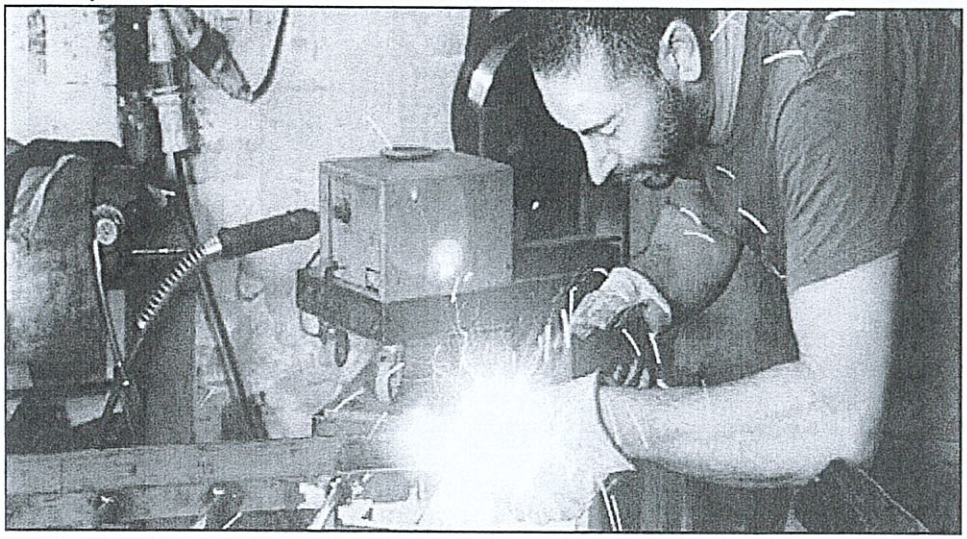
(b) List and describe TEN (10) steps that need to be performed during the entry of the safe work procedure for Confined Space.

(20 marks)

Question 3

Construction safety is critical for worker welfare and project success. Prioritizing risk mitigation through advanced machinery technologies and a safety-oriented culture, can ensure safer work environments and maintain project efficiency, crucial for overall industry sustainability.

(a) Based on the figure below, identify FIVE (5) hazards, discuss their hazard control, and explain how each identified hazard can be reduced or eliminated.



(15 marks)

(b) What is the difference between excavation and trench?

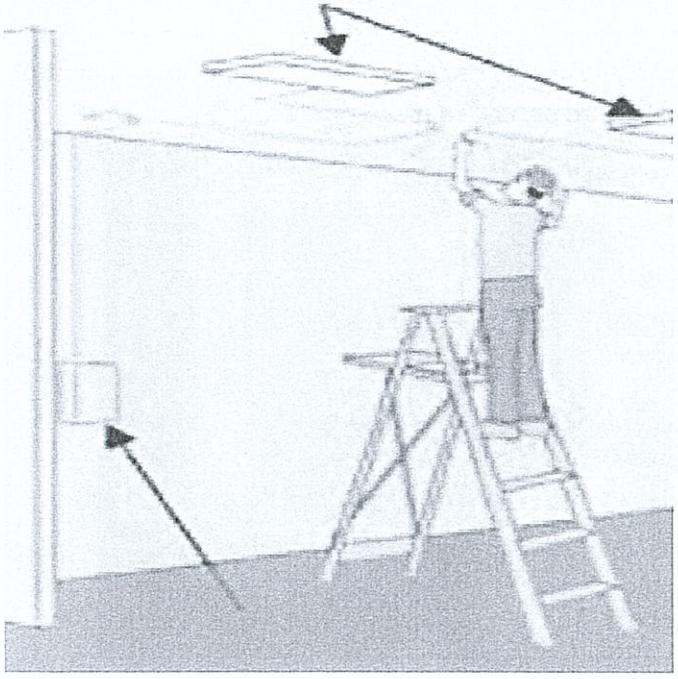
(5 marks)

(c) List FIVE (5) dangers of trenching and excavation operations.

(5 marks)

Question 4

The figure below shows a worker attempting to correct an electrical problem involving two non-operational lamps. Without shutting off the power at the circuit breaker panel or testing the wires to check if they were live, he examined the circuit in the area where he thought the problem was located. He collapsed to the floor and was found dead.



(a) Identify FIVE (5) possible causes of this accident

(10 marks)

(b) Suggest control measures for each of the causes mentioned at (a).

(5 marks)

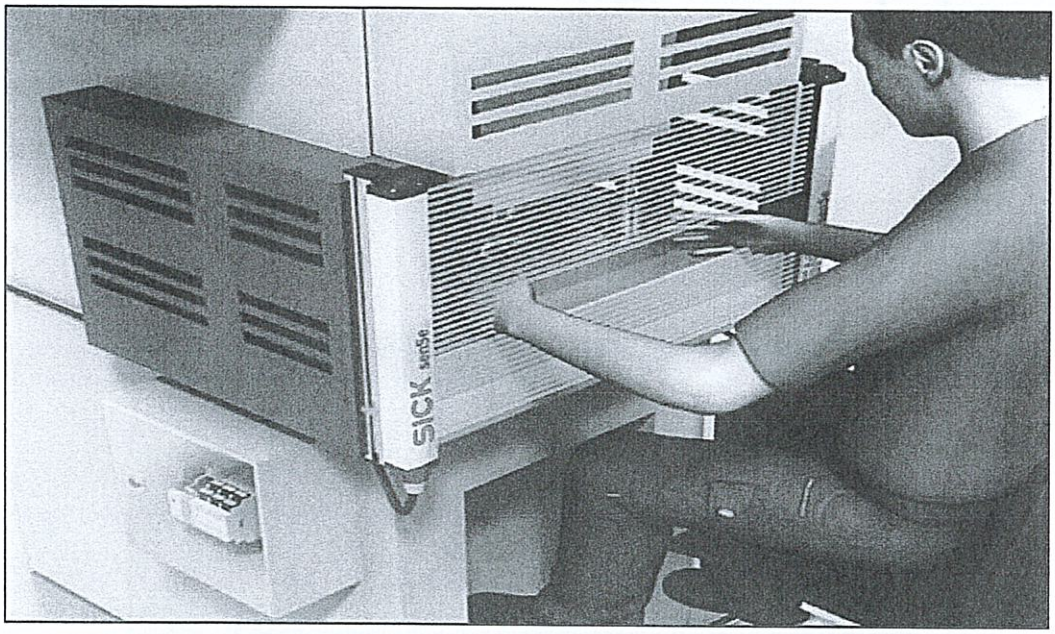
(c) Suggest some common signs or indicators of potential electrical hazards in a workplace environment, and how can they be identified and mitigated.

(10 marks)

Question 5

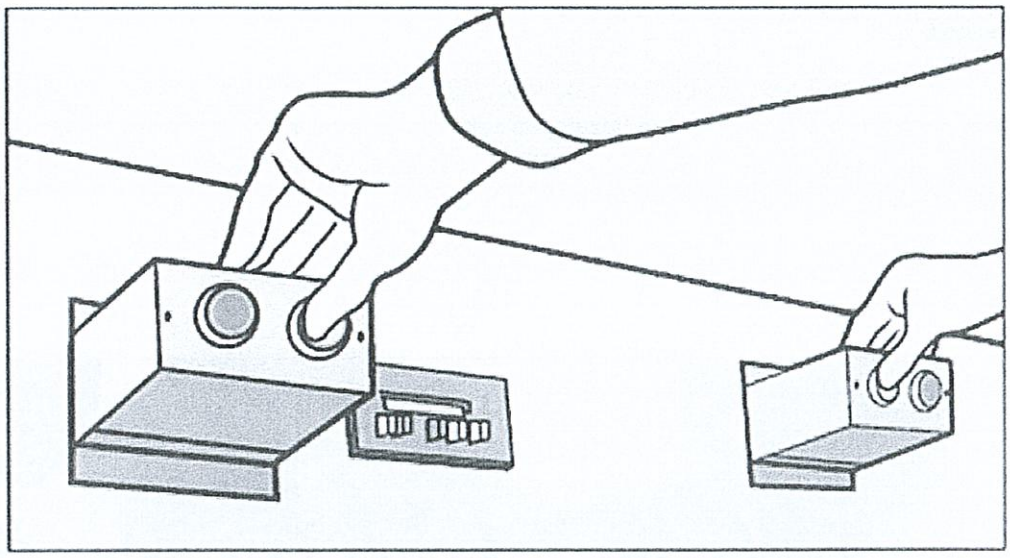
Engineering controls are important to occupational safety and health, as they can prevent accidents and injuries by reducing exposure to hazardous substances, equipment, or environments.
Based on the figures below, describe the FIVE (5) examples of engineering controls that can be used to control hazards from using machinery in the workplace.

(a) .



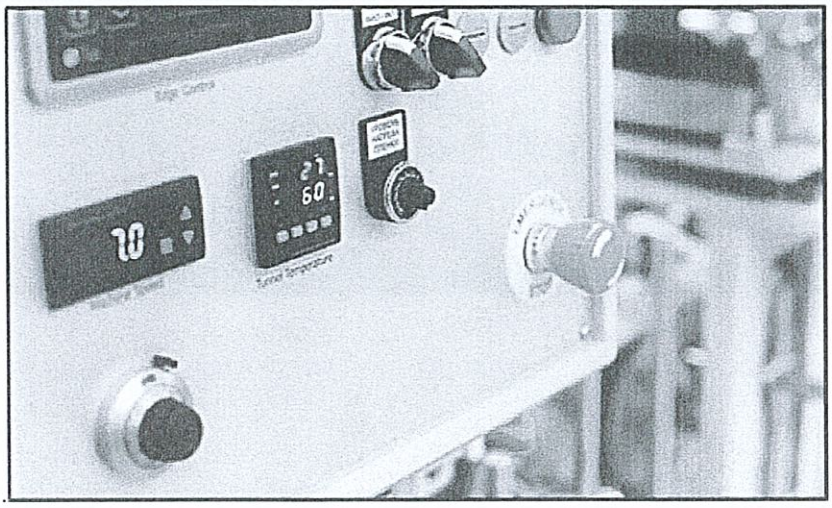
(5 marks)

(b)



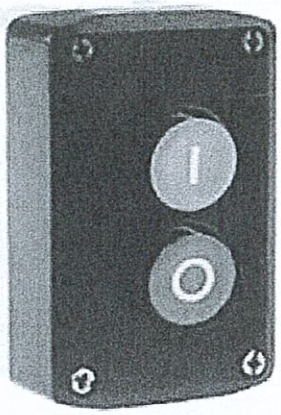
(5 marks)

(c)



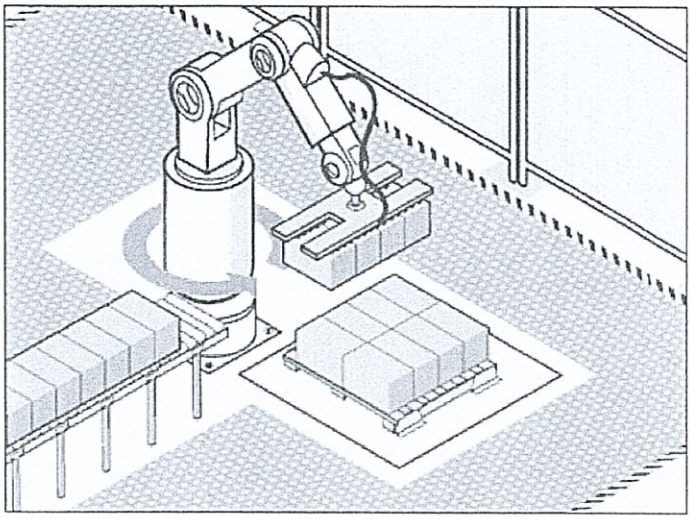
(5 marks)

(d)



(5 marks)

(e)



(5 marks)

END OF EXAMINATION PAPER