



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2022/2023**

- COURSE NAME : PLANT AND CONSTRUCTION SAFETY
- COURSE CODE : BNS 20603
- PROGRAMME CODE : BNS
- DATE : JULY/AUGUST 2023
- DURATION : 3 HOURS
- INSTRUCTION :
1. ANSWER ALL QUESTIONS.
 2. THIS FINAL EXAMINATION IS CONDUCTED VIA **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** (a) Define the meaning of incident, according to:
- (i) Milch and Laumann (2019)
 - (ii) Enya *et al.* (2018)
 - (iii) Rusiecki *et al.* (2018)
- (5 marks)
- (b) According to Alkhalidi *et al.* (2017), there are **TWELVE (12)** causes of accident. List out **TEN (10)** causes of accident.
- (10 marks)
- (c) The Deepwater Horizon incident's in April 2010 is an example of catastrophic Loss-of-Containment (LOC) incident caused total spilled oil was around 185 million gallons plus another 33.8 million gallons into Gulf of Mexico. As a result, hundreds of miles of shoreline were oiled and large areas of the sea were closed to fisherman. The incident also killed 11 peoples and injured 15 crews on board due to massive explosions.

Therefore, identify **TWO (2)** main causes of accident and explain it by providing **TWO (2)** explanation for each main causes of accident.

(10 marks)

- Q2** (a) Identify **FIVE (5)** risk factors of ergonomic hazard.
- (5 marks)
- (b) With the frequent use of power tools and heavy machinery, construction professionals are exposed to high amounts of vibration which causes an ergonomic hazard of vibration at workplace.
- List out **FIVE (5)** construction work which causes an ergonomic hazard of vibration at workplace.
- (5 marks)
- (c) There are **FOUR (4)** possible symptom might occur when employees having an issues regarding on ergonomic hazard of vibration. Identify and explain all **FOUR (4)** possible symptom of ergonomic hazard of vibration at workplace.
- (10 marks)
- (d) An accident has occurred during vibration work. Employees having a Hand-Arm Vibration Syndrome (HAVS), damaged that occur in the fingers, hand and arms when working with vibrating tools. Therefore, you as a Safety Officer has been assign by your employer to conduct an assessment and provide a complete report, focusing on control measure to prevent this incident from happen again in a future.

Propose **FIVE (5)** control measures that relates with an ergonomic hazard of vibration.

(5 marks)

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- Q3** (a) Determine **FIVE (5)** roles and responsibility of personal protective equipment (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. Discover **FIVE (5)** maintenance procedure purposely for head protection.
(10 marks)
- (c) 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, propose **FIVE (5)** control measure by referring Regulation 15 (1), to avoid the incident of chemical hazardous to health occur in a future.
(10 marks)
- Q4** (a) Determine **FIVE (5)** general duties of employer.
(5 marks)
- (b) Carry out **FOUR (4)** general duties safety and health officer.
(10 marks)
- (c) Differentiate **FIVE (5)** safety and health requirement between the Site Safety Supervisor (SSS) and Contractor Safety Supervisor (CSS).
(10 marks)

- END OF QUESTIONS -

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