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Universiti Tun Hussein Onn Malaysia

**UNIVERSITI TUN HUSSEIN ONN  
MALAYSIA**

**FINAL EXAMINATION  
SEMESTER II  
SESSION 2018/2019**

COURSE NAME : OCCUPATIONAL SAFETY AND HEALTH  
COURSE CODE : BDU 21002  
PROGRAMME : 2 BDC/2 BDM  
EXAMINATION DATE : JUNE/JULY 2019  
DURATION : 2 HOURS  
INSTRUCTION : ANSWER **FOUR (4)** QUESTIONS ONLY

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

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**Q1** Tensei Berhad is an established construction company that build high rise building for commercialization. The company currently employs 100 workers including administration, engineering and general staff. Last month, PETRONAS awarded the company to build 5 stories office building near RAPID Pengerang Project and the total lump sum project worth RM 24 million for 2 years. You are one of the new recruitment and appointed as junior safety engineer cum safety & health officer at this company. By legislation, you are needed to prepare the compliance document based on the OHSAS 18001:2007. You also represent the company as secretary during the safety and health meeting with the client.

- (a) Define the system requirements that based on the Plan-Do-Check-Act (PDCA) framework for the OHSAS 18001 standard. (5 marks)
- (b) Explain the designated clauses for developing OHSAS 18001:2007 at the workplace. (10 marks)
- (c) Prepare plan for measuring the effectiveness of the Occupational Safety & Health Management System (10 marks)

**Q2** (a) Risk = Likelihood x Severity. Examine this statement and provide suitable interpretations for each term in relation to the area of occupational safety and health. (6 marks)

- (b) You have been appointed as a personnel responsible for the safety and health for your department. In a recent company meeting, you have been requested to propose a Hazard Identification, Risk Assessment and Risk Control (HIRARC) process for your company. Construct an appropriate flowchart to correctly represent your proposed HIRARC process. (19 marks)

**Q3** (a) “Five people were killed on Saturday when a private helicopter crashed in Kuala Lumpur during installation of final part top of a communication tower. The crash killed all three men on board including the pilot, co-pilot and Helistall Sdn. Bhd worker as well as a pregnant woman and a child who were walking along the busy road where the helicopter crashed. Investigation found that the accident was caused by the pilot error that failed to operate the helicopter in accordance with its operation plan”.

Referring to this accident, provide your evaluation and suggestion on:

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- i. Other potential factors that cause the accident. (6 marks)
      - ii. Strategies for hazards prevention and control. (6 marks)
    - (b) Machinery in manufacturing industries such as electrical crane and forklift require proper handling to ensure safety. Provide your evaluation and suggestion on:
      - i. Typical accidents related to mechanical handling of the machineries. (6 marks)
      - ii. Strategies for accident prevention related to mechanical handling of the machinery. (7 marks)
- Q4**
- (a) Occupational health is about promotion and maintenance of the physical, mental and social levels of staff in all work sectors as well as prevention from illnesses and diseases. As refer to petrochemical industries, construct a diagram that explains the concept of promotion and prevention of occupational health. (7 marks)
  - (b) As an engineer in a manufacturing factory, you are required to identify health hazards at your workplace. Based on the identified hazards, propose three (3) methods to control the risks. Support your proposal with suitable justification and examples. (9 marks)
  - (c) The objective of observation and inspection (O&I) is to identify health hazards at the workplace and ensure that occupational safety and health procedures are implemented. Compare **THREE (3)** workplace observation approaches to identify health hazards from both planned and unplanned activities. (9 marks)
- Q5**
- (a) Heinrich had introduced a theory of accident in 1930's.
    - i. Select and draw a suitable diagram that represents Heinrich's theory of accident. (5 marks)

- ii. Suggest how this theory can be applied in a mechanical workshop to prevent accident.  
(2 marks)
- (b) Management at all levels in the organization or in the workplace should maintain a safety culture and safe work practices. All incidents and injuries can be avoided if appropriate care is taken by both the worker and the employers. Propose four (4) root causes of incident due to poor management in the workplace. Support your proposal with suitable example.  
(8 marks)
- (c) Assuming there is an incident happens at your workplace as a result of poor safety management due to the non-establishment of the Occupational Safety and Health Committee. Suggest FIVE (5) principles of the incident prevention that should be highlighted by the committee toward improving the working environment. Support your suggestion with suitable description.  
(10 marks)

**-END OF QUESTIONS-**