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**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

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

COURSE NAME : OCCUPATIONAL SAFETY AND HEALTH  
COURSE CODE : BDA 31302  
PROGRAMME : 3 BDD  
EXAMINATION DATE : DECEMBER 2018/JANUARY 2019  
DURATION : 2 HOURS  
INSTRUCTION : ANSWER **FOUR (4)** QUESTIONS ONLY

THIS QUESTION PAPER CONSISTS OF FIVE (5) PAGES

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**TERBUKA**

- Q1** (a) The Occupational Safety and Health Act 1994 has made it mandatory for workplaces with forty or more employees to have a Safety and Health Committee. Sketch a suitable organization chart composition of minimum Safety and Health Committee for company with less than 100 employees.  
(5 marks)
- (b) You have been appointed as a safety and health engineer at a palm oil processing company. The first task you need to do is to strengthen the function of the safety and health committee at the work place. Analyse the situation and elaborate **SEVEN (7)** specific functions of Safety and Health Committee that you will highlight to the top management.  
(14 marks)
- (c) The Environmental Management System (EMS) manages the environmental aspects of the companies. The first version of the ISO14001 was published in 1996, and a revised version was published in November 2004. Construct a suitable diagram or model to represent the **FIVE (5)** major clauses of the Environmental Management System (EMS) ISO14001:2004 standard and describe each clause.  
(6 marks)
- Q2** (a) A company which has been in operation for many years invites you for a discussion related to matters about identification of hazards at work place. The company officer explains that they use only the previous accident report as a method to identify the hazards at work place. He also stated that the previous accident report is the only best method for them. Criticize his statement and counter propose him by giving detail explaining of **FIVE (5)** other methods which should also be used to identify hazards at work place.  
(10 marks)
- (b) **Figure Q2(b)** shows the hazards detected at a factory. Evaluate the information in the figure and by using the hazards control hierarchy, propose the methods should be implemented in the factory to control the hazards.  
(15 marks)

- Q3** (a) A recently conducted data analysis related to a construction work has resulted to **TWO (2)** most critical accidents which are:
- (i) Struck by falling object
  - (ii) Inhaling toxic chemical, gas or vapors

Compare both type of accidents above by giving a specific and clear example describing how each item may happen and suggest **FOUR (4)** causal factors related to each of them.

(8 marks)

- (b) The main objective in the principles of electrical safety is to protect human from electric shock, fire and burning effect resulted from contact with electricity. Using electrical safety knowledge, support the above statement by proposing **TWO (2)** fundamental steps to prevent human from contact with electricity. Provide descriptive explanation for each proposed preventive fundamental step.

(6 marks)

- (c) You are assigned as the senior safety officer at a worksite involving mechanical work. In executing the role of the safety officer, your first priority is to initiate a safety plan for the whole worksite. You have completed the process of identifying hazards and risk assessment for each task at the work area. The next step is to arrange for preventive and control actions to manage the risk at the worksite. Based on your safety and health work experience, evaluate **TWO (2)** type of accidents commonly happened at mechanical worksite by providing description and example of the accidents. Support your evaluation by proposing **SEVEN (7)** suitable methods for hazards preventive and control involving mechanical work.

(11 marks)

- Q4** (a) A few organizations related to occupational health for international services are the Health Safety Executive (United Kingdom), American Conference of Industrial Hygienist (United State) and International Labour Organization (ILO). Identify and provide brief description of its function for **FOUR (4)** organisations in Malaysia which are directly involved in supporting the occupational safety and health function.

(10 marks)



- (b) As an engineer in a manufacturing factory, you are required to conduct a special meeting with the workers to discuss about the chemical health hazards at your workplace. Based on a hazard identification study, you have decided to focus on the hazards of asbestos. Evaluate the potential hazards from asbestos and discuss its related health risks and suggested method to control it. Support your discussion with suitable examples.

(15 marks)

- Q5** (a) An accident has occurred at an automotive components manufacturing plant in Shah Alam, Selangor and caused serious injury to one of the employees. As a safety and health officer, you have been asked by the employer to hide the mistakes of the management during the investigation. Select your decision (whether agree or not) on employer's request and defend your decision based on the principles of accident investigation.

(8 marks)

- (b) In view that there is always risk of accident happening in a work place, management must prepare to face it. This preparation before the incident include to identify who has the authority to investigate and carry out the corrective action as well as to have a system for notification and recording all incidents and injuries. Differentiate the responsibilities for all persons involved in an incident investigation and discuss a suitable accident notification procedure.

(11 marks)

- (c) According to Early Theory of Accidents by Heinrich (1930's), 88% of accident are caused by unsafe act or condition of person. Justify why Heinrich's theory was considered weak and negative by current practice.

(6 marks)

- END OF QUESTION -

