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**UNIVERSITI TUN HUSSEIN ONN
MALAYSIA**

**FINAL EXAMINATION
(ONLINE)
SEMESTER II
SESSION 2019/2020**

COURSE NAME	:	OCCUPATIONAL SAFETY AND HEALTH
COURSE CODE	:	BDA 31302
PROGRAMME	:	3 BDD
EXAMINATION DATE	:	JULY 2020
DURATION	:	2 HOURS
INSTRUCTION	:	ANSWER FOUR (4) FROM FIVE (5) QUESTIONS PROVIDED

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

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- Q1** (a) Compare the functions between National Institute of Occupational Safety and Health (NIOSH) and Social Security Organization (SOCSO). Explain their responsibilities in relation to the safety and health of working environment in Malaysia. (5 marks)
- (b) “The role and responsibility of safety and health officer (SHO) is not only to help the employer to provide the statement of safety policy. Other safety and health issues are also under the responsibility or duty of the SHO.” Support this statement by explaining **FIVE (5)** other important general duties of SHO stated in OSHA 1994. (10 marks)
- (c) The elements of Occupational Health and Safety Management System OHSMS which are not in proper sequence are action for improvement, planning & implementing, policy, organizing, and evaluation.
- (i) Construct a suitable flow diagram showing the correct sequence of the OHSMS process. (3 marks)
- (ii) Support the diagram by providing clear description what each of the element is and justify its functions toward the effectiveness of the OHSMS. (7 marks)
- Q2** (a) In a discussion with a group of production worker, one of the said that: “It is impossible for us to avoid risk of accident because almost all accidents occurred naturally.” As a safety and health officer in the company, you are expected to provide your opinion on this matter. Argue the worker’s statement by explaining the meaning of risk and HIRARC. Support your argument by also thoroughly discussing the purposes of HIRARC. (10 marks)
- (b) “The informal risk assessment techniques to be used in managing hazards in industry is a method known as “Take Time, Take Charge”. However, this is not the only technique available to manage hazards in workplace.” Based on your engineering knowledge, evaluate and support the above statement by suggesting and explaining **THREE (3)** other different informal risk assessment techniques to be used in managing hazards. (5 marks)
- (c) A very serious occupational hazard from a few machines has been identified within a production floor of a manufacturing company. Upon analyzing this situation, you have decided to use the hierarchy of control to manage the hazards. The management do not agree with one of the hierarchy control method which is the elimination. Compare

FIVE (5) other hierarchy control methods which can be considered in managing the hazards by explaining each of them and provide suitable example.

(10 marks)

- Q3** (a) A recently conducted data analysis related to a construction work has resulted to **TWO (2)** most critical accidents which are:
- (i) Buried by collapse cliff / earth / fallen structure
 - (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 elaborating **FOUR (4)** factors to consider for safer electricity usage to prevent human from contact with electricity. Provide descriptive explanation for each factors.

(12 marks)

- (c) It is common that the chemist is always working with chemical substances. Identify and explain the health effects to the body if there is negligence when doing work involving chemicals.

(5 marks)

- Q4** (a) Risk control is the stage where the actions to identify and implement safety measures to control risks are performed having in mind the protection of workers health and safety, as well as their monitoring over time. Recommend **FOUR (4)** the main ways to control a hazard.

(8 marks)

- (b) Related legislations stated in Occupational Safety & Health Act (OSHA) 1994 (General), the concern is to promote a working environment that is conducive and suitable to the worker's psychological and physiological needs such as vibration. Differentiate **TWO (2)** items between whole body and hand arm vibration health effect.

(5 marks)

- (c) Sources of biological hazards may include bacteria, viruses, insects, plants, birds, animals, and humans. These sources can cause a variety of health effects ranging from skin irritation and allergies, cancer and etc. Write the interaction between agent, host and environment. Support your explanation with suitable diagrams.
- (12 marks)

Q5 (a) Implementing incident prevention is very important in organization. Describe **FOUR (4)** principles of incident prevention.

(8 marks)

- (b) Sketch the early theory of accidents(Heinrich,1930's)
- (5 marks)

- (c) Investigation of workplace accidents and incidents is an essential part of the proactive management of health and safety. For an investigation to be worthwhile, it is essential that the management and the workforce are fully involved. Propose **FOUR (4)** persons who are responsible for incident investigation. Support your answer with examples of their duties.
- (12 marks)

– END OF QUESTION –

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