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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2016/2017**

COURSE NAME	:	OCCUPATIONAL SAFETY AND HEALTH
COURSE CODE	:	BDA 31302
PROGRAMME	:	3 BDD
EXAMINATION DATE	:	DECEMBER 2016 / JANUARY 2017
DURATION	:	2 HOURS
INSTRUCTION	:	ANSWER FOUR (4) QUESTIONS ONLY.

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THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

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- Q1** (a) Compare the differences between Occupational Safety and Health Act (OSHA) and Factories and Machinery Act (FMA). Provide examples to support your comparison. (10 marks)
- (b) As an engineer in an assembly plant, propose **FIVE (5)** strategies to improve the work safety based on Occupational Safety and Health Act (OSHA) and Factories and Machinery Act (FMA). Support your proposal with suitable justification and examples related to an assembly line. (15 marks)
- Q2** (a) Differentiate between risk and hazard. Provide examples to support your comparison. (5 marks)
- (b) As an engineer in an electronic products manufacturing company, you are required to conduct risk assessment using Hazard Identification, Risk Assessment and Risk Control (HIRARC) process. Suggest the HIRARC activities that should be conducted with suitable justification and examples. (20 marks)
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- Q3** (a) Assuming you are an engineer in a construction site:
- i. Propose **THREE (3)** typical accidents happen in construction site. (6 marks)
- ii. Suggest **SIX (6)** countermeasures for accidents proposed in Q3(a)(i). (6 marks)
- (b) Mechanical handling equipments in a heavy industry environment require proper handling to ensure safety.
- i. Propose **THREE (3)** typical accidents related to mechanical handling equipments. (6 marks)
- ii. Suggest **SEVEN (7)** countermeasures for accidents proposed in Q3(b)(i). (7 marks)

- Q4** (a) Differentiate between chemical, physical and biological hazards. Provide examples to support your comparison. (9 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 **FOUR (4)** methods to control the risks. Support your proposal with suitable examples. (16 marks)
- Q5** (a) It is important to understand and address several causal factors that lead to accident. Describe the Accident Causation Model. (5 marks)
- (b) All levels management in the organization or in the workplace should perform the tasks properly and this performance based approach ensures everyone maintains a safety culture and safe work practices. Better communication and coordination on multi employer worksites can improve safety and health in all types of workplaces. By this way, all incidents and injuries can be avoided if appropriate care is taken by both the worker and the employers.
- i. Propose **FOUR (4)** root causes of incident due to poor management in the workplace. Support your proposal with suitable example. (8 marks)
- ii. Suggest **SIX (6)** principles of the incident prevention toward improving the working environment. Support your suggestion with suitable example. (12 marks)

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- END OF QUESTION -