



**UNIVERSITI KUALA LUMPUR**  
**Malaysian Institute of Marine Engineering Technology**

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**FINAL EXAMINATION**  
**SEPTEMBER 2016 SEMESTER**

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**COURSE CODE** : LGB31002

**COURSE NAME** : OCCUPATIONAL SAFETY AND HEALTH IN MARITIME  
INDUSTRY

**PROGRAMME NAME** : BACHELOR  
(FOR MPU: PROGRAMME LEVEL)

**DATE** : 20 JANUARY 2017

**TIME** : 03.00 PM – 05.00 PM

**DURATION** : 2 HOURS

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**INSTRUCTIONS TO CANDIDATES**

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1. Please **CAREFULLY** read the instructions given in the question paper.
  2. This question paper has information printed on both sides of the paper.
  3. Please write your answers on the answer booklet provided.
  4. Answer should be written in blue or black ink except for sketching, graphic and illustration.
  5. Answer **FOUR (4)** questions only.
  6. Answer all questions in English.
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**THERE ARE 6 PAGES OF QUESTIONS, INCLUDING THIS PAGE.**

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**INSTRUCTION: Answer only FOUR questions.**

**Please use the answer booklet provided.**

**Question 1**

The Government introduces legislation to make safety and health issues mandatory for employers and employees. The Government imposes penalties for failing to comply with the law. These fines aim to encourage people to take the legislation seriously and avoid the much more serious consequence of loss of life.

- (a) Occupational Safety and Health is a cross-disciplinary area concerned with protecting the safety, health and welfare of people engaged in work or employment. Discuss the importance of legislation enforcement into working environment.

(5 marks)

- (b) "Industrial Relation Act is defined to provide for the regulation of the relations between employers and workmen and their trade unions, and the prevention and the settlements of any differences or disputes arising from their relationship and generally to deal with trade disputes and matters arising." Define:

- i. Employment Act and SOCSO Act 1969
- ii. Industrial Court
- iii. Petroleum (Safety Measures) Act 1984

(6 marks)

- (c) Briefly justify the main principles that had been taken as the foundation in the drafting process of the OSHA Act.

(6 marks)

- (d) The Occupational Safety and Health Act 1994 (OSHA 1994) is the overall legislation in respect of safety and health and the current law on Factories and Machinery Act 1967 (FMA 1967) shall be maintained as the technical aspect of safety legislation. Please compare between FMA 1997 and OSHA 1994.

(8 marks)

### Question 2

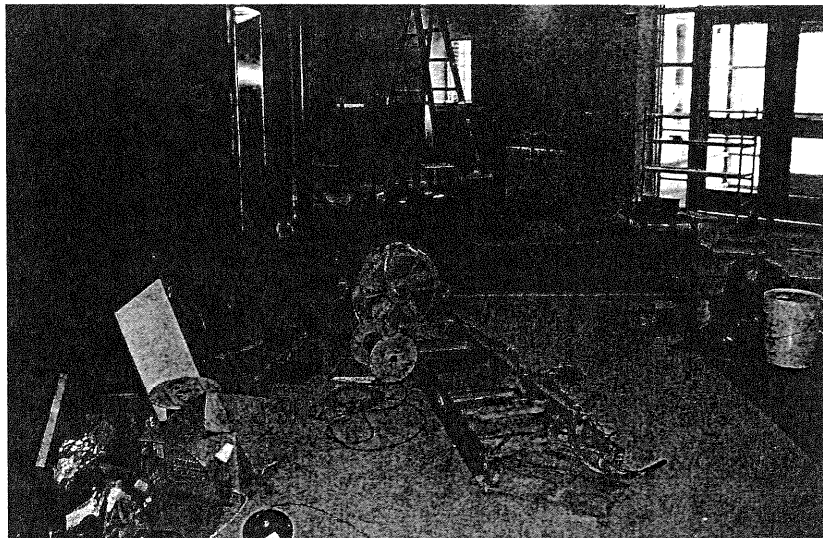
- (a) Safety knowledge is basically applied through a good teamwork among employees. This knowledge starts from the management, supervisor and to the employees. Apply the basic safety knowledge around your shipyard.

(5 marks)

- (b) The workplace can be a safety risk environment. Discuss the main contributor workplace accidents.

(5 marks)

- (c)



**Figure 2.1: Industrial Hazards**

Hazard is anything that could cause injury or illness. There are 4 sequences step on how to implement Hazard Control Management. Referring to the above situation in the Figure 2.1, apply your knowledge to classify the hazards. Also you are required to design on how to control the hazard and write your answer only for Step 3: Risk Control.

(15 marks)

**Question 3**

- (a) An industrial operation's phase needs to have a good housekeeping system and it should be implemented to the entire premises. Discuss in detail the needs of a proper housekeeping. (5 marks)
- (b) Briefly explain the examples of common accidents caused by poor housekeeping. (5 marks)
- (c) Explain each of the 5s housekeeping system, then illustrate the implementation of the 5s concept around your shipyard. (15 marks)

**Question 4**

Shipbuilding activities are some of the most hazardous shipyard operations. There are multiple types of construction which may include modular construction, traditional construction (from keel up), and fiberglass/composite material mold construction. Shipbuilding includes constructing, assembling, installing, cleaning, painting, outfitting, and testing. Hazards include exposure to toxic substances, hazardous atmospheres, electrocution, falls, fires, and explosions. These hazards can be eliminated or minimized through use of an effective safety and health program.

- (a) Discuss five (5) example of each major pollutions effluent caused by the marine industry in Malaysia. (10 marks)
- (b) To fight against pollution, the Malaysian Government has set a policy to ensure that Malaysians live in a clean and healthy environment. Examine the policies that are implemented by government. (5 marks)
- (c) The two main areas of concern regarding workplace pollution are noise pollution and air pollution. Discuss the sources of both pollution in shipyards operations and suggest for the control measures. (10 marks)

**Question 5**

- (a) Explain the care that must be taken to ensure personal safety during electrical maintenance.  
(5 marks)
- (b) While handling with machinery, there are points where work is performed on the material, such as cutting, shaping, boring, or forming of stock must be guarded. All the above mentioned, task or work all parts of the machine which move, such as: flywheels, pulleys, belts, couplings, chains, cranks, gears, feed mechanisms and auxiliary parts of the machine. Discuss the requirement for safe guard.  
(10 marks)
- (c) Critically think the purpose of Code of Practice for Safe Working in Confined Space 2001 is introduced by the Department of Occupational Safety & Health, Ministry of Human Resources of Malaysia.  
(10 marks)

**END OF EXAMINATION PAPER**