



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

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**FINAL EXAMINATION**  
**JANUARY 2016 SESSION**

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**SUBJECT CODE** : LCD20402  
**SUBJECT TITLE** : SHIPYARD OPERATION  
**LEVEL** : DIPLOMA  
**TIME / DURATION** : 9.00 A.M - 11.00 A.M / 2 HOURS  
**DATE** : 27 MAY 2016

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**INSTRUCTIONS TO CANDIDATES**

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1. Please read the instructions given in the question paper CAREFULLY.
  2. This question paper is 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. This question paper consists of TWO (2) sections; Section 'A' and Section 'B'. Answer all questions in Section 'A' and TWO (2) questions only from Section 'B'.
  6. Answer all questions in English.
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**THERE ARE 6 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.**

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**SECTION A (Total: 60 marks)****INSTRUCTION: Answer ALL questions.****Please use the answer booklet provided.****Question 1**

- a) There are two major categories of hazard in construction sites. Briefly explain these **two (2)** categories of hazard.  
(4marks)
- b) To control hazards one must know how to manage them. There are four main steps in hazard management. Kindly list down the **four (4)** step of hazard management.  
(4marks)
- c) Safe storage, safe handling and smooth flow of materials in a shipyard may contribute towards making a shipyard very productive and efficient. Briefly **discuss** how efficiency in material storage and handling can be translated to profits.  
(12marks)

**Question 2**

- a) Nowadays, computers are used extensively through all shipyards. It is to control the flow of materials so that the construction phase can be more efficient. There are critical areas for the efficient flow and handling of materials. List all six (6) critical areas  
(6marks)
- b) There are 8 main risks to personal working in shipyard. List **FOUR (4)** all of them.  
(4 marks)

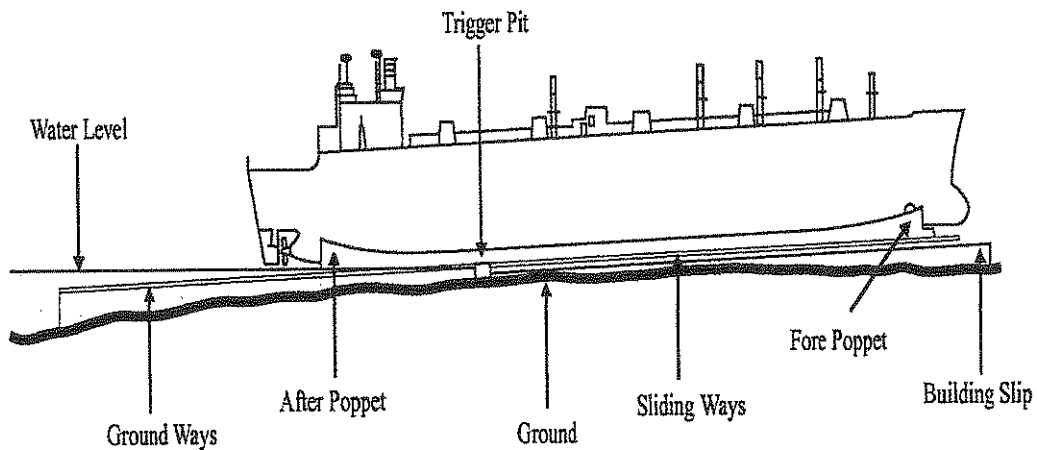
**Question 3**

Periodically vessels are required to be serviced and maintained. Normal shipyards will need to have these facilities to cater the needs of those mentioned earlier. Explain and review the characteristic of graving docking and floating dock. Describe each of it. (You can use sketches to assist your explanation)

(10 marks)

**Question 4**

(a) Review the characteristics of end launching.



(6 marks)

(b) Explain the procedure of launching. You can use diagram to assist your answer

(14 marks)

**SECTION B (Total: 40 marks)**

**INSTRUCTION: Answer only TWO (2) questions.**  
**Please use the answer booklet provided.**

**Question 5**

An existing boatyard has a site (135m x 72m), at a riverside with little tide change. The river runs along the full length of the 135m eastern boundary of the site from north to south and finally to sea. There are lands on the other three sides of which the western boundary has lowlands granite soil. The site has a slipway with a capacity of 200 tonne in the middle of the western side. Two large sheds of 40m length where the repair facilities are housed and site cabin offices are located along the southern boundary. The rest of site is used for the unprotected storage of material and spare parts i.e. in the open. Boats entering for repair normally from the fishermen coming from the south. Road access is at the southern boundary of the site and is not suitable for very heavy vehicles. The boatyard currently operates a wooden and steel boat repair business. The owner finds that the boat yard is not efficient in handling the work due to constraints in the yard design. Your task is to redesign by sketching the new yard layout to enable it to be more efficient and effective. Relocate and name all the components of the newly designed yard based on the above information and state why you choose the new locations.

(20 marks)

**Question 6**

- (a) Working in shipyard can be summarized in 3D concept. Dangerous, dirty and demanding. The men and women whose job it was to install, repair, or replace the many types of asbestos-containing components of ships may have been subjected to toxic levels of asbestos on a daily basis, for months or years at a time. Most of the times, however, the asbestos fibers were not seen, even though they were still present and could easily be inhaled by unaware workers.

List the duty and functions of a safety officer in abating the above situation.

(10 marks)

- b) The correct choice of resource scheduling helps ensure that materials/equipment/items are available on site before a construction process can begin. **Discuss** the rationale of adopting

a. 'manufacturing in-house' approach (5marks)

b. 'Sub-contracting' approach (5marks)

**Question 7**

a) As a form of early planning a shipyard would normally appoint a project manager to handle the repair of a ship expected to enter the shipyard sometime in very near future. Certain preparation would need to be done. Either by ship owner or ship yard staff before, during, and after docking at the shipyard. Examine the various preparations required below and briefly explain any two (2) of them:

- i. Pre-docking preparation by ship staff
- ii. Pre-docking by shipyard staff
- iii. Preparation after docking or pre work preparation
- iv. Pre launch preparation (on completion of work)

(10marks)

b) How does an employer make a shipyard a safe place to work for their employee?

(10marks)

**END OF QUESTION**

