



UNIVERSITI KUALA LUMPUR
Malaysian Institute of Marine Engineering Technology

FINAL EXAMINATION
JANUARY 2016 SESSION

COURSE CODE : LCD 22102
COURSE NAME : SHIPBUILDING TECHNOLOGY FOR ECONOMIC PRODUCTION
PROGRAMME NAME : DIPLOMA OF SHIP DESIGN
DATE : 27 MAY 2016
TIME : 09.00 AM – 11.00 AM
DURATION : 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. Please read the instructions given in the question paper CAREFULLY.
 2. This question paper has information printed on both sides of the paper.
 3. This question paper consists of TWO (2) sections: Section A and Section B.
 4. Answer ALL questions in Section A. For Section B, answer TWO (2) questions only.
 5. Answer all questions in English language only.
 6. Please write your answers on the answer booklet provided.
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THERE ARE 3 PAGES OF QUESTIONS, INCLUDING THIS PAGE.

SECTION A (Total: 60 marks)**INSTRUCTION: Answer ALL questions.**

Please use the answer booklet provided

QUESTION 1

- a) The shipyards must have standard layout to make sure the smooth running when start production of ship. Outline and explain all the features. (10 marks)
- b) Identify the shipbuilding process and explain two (2) processes from your answer. (10 marks)

QUESTION 2

- a) Describe the hot and cold forming processes. (10 marks)
- b) Explain in detail the computer-based tools below. (Support your answer with related marine programme).
- i. Computer Aided Design
 - a. Description (3 marks)
 - b. Capabilities (6 marks)
 - c. Software (1 marks)

QUESTION 3

- a) Explain in detail about Computer Aided Manufacturing. (Support your answer with related marine programme). (10 marks)
- b) Identify five (5) advantages when the design files are documented. (10 marks)

SECTION B (Total: 40 marks)

INSTRUCTION: Answer TWO questions ONLY.

Please use the answer booklet provided

QUESTION 4

- a) Table 1 show the basic traditional and modern shipbuilding processes. Complete the table below with the correct sequence of building process. (10 marks)

Traditional Building Processes	Modern Building Processes
1. Design plans	1. Design plans
2. Construction Data: Table of offsets	2. Construction Data: Computer generated + lofting

Table 1: Traditional & Modern Shipbuilding Process.

- b) The successful practice of shipbuilding is not only a design matter, but depends on the integration of various departments in the shipyard. Design the relevant organization chart lead by Manager at the top. (10 marks)

QUESTION 5

- a) Identify the industry segments and job positions that Naval Architects can work. (10 marks)
- b) Explain the difference between design and engineering. (2 marks)
- c) Identify the ethics that ship designer should have. (3 marks)
- d) Simulation uses computer to mimic and predict processes of design. Explain in details about design simulation techniques. (5 marks)

QUESTION 6

- a) Presently the simulation technology have become a trends for commercial business. Explain in details about operation simulation techniques. (5 marks)
- b) The conventional launching method for ship is using a slipway. Sketch and label a picture of end launching at slipway. (5 marks)
- c) The hull of a ship is constructed (in a series of stages outlined above and) such that production is continuous. Many different layouts are possible, but the best layout is that in which the materials travel the shortest possible distance with minimum handling. Sketch two (2) the possible shipyard layout that can be applied in shipbuilding industry. (10 marks)

END OF EXAMINATION PAPER

