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THERE ARE 3 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

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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. Answer FOUR (4) questions ONLY.
  6. Answer all questions in English.
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INSTRUCTIONS TO CANDIDATES

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DATE	:	26 MAY 2016
TIME / DURATION	:	2.00 PM-4.00 PM (2 HOURS)
LEVEL	:	DEGREE
SUBJECT TITLE	:	CARGO HANDLING SYSTEM
SUBJECT CODE	:	LOB 20102

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FINAL EXAMINATION  
JANUARY 2016 SESSION

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UNIVERSITI KUALA LUMPUR  
Malaysian Institute of Marine Engineering Technology

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SET A

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INSTRUCTION: Answer FOUR (4) questions ONLY.

Please use the answer booklet provided.

QUESTION 1

- a) The main objectives of cargo stowage are for the safety of life at sea and pollution control to protect the oceans and their living resources. In order to achieve the objectives, classify FOUR (4) main principles of material handling and stowage for cargo operations. (10 marks)

- b) Cargoes and merchandise are broadly divided into several types depending on size and the characteristics. Each of the item transported using water, air and land transportation and stored in a different types of storage depends on the characteristic of the items. Distinguish FIVE (5) types of cargoes and their carrying units transported by sea. (15 marks)

QUESTION 2

Cargo Officers will have a variety of duties before, during and after cargo operations begin. He/she should be aware that monitoring the cargo movements and ensuring parcels remain in good condition is protecting the owners' interests. Extensive ship keeping activities also go along with loading and discharging the vessel's cargo.

- a) Justify FIVE (5) main duties of Cargo Officers before, during and after cargo operations. (15 marks)

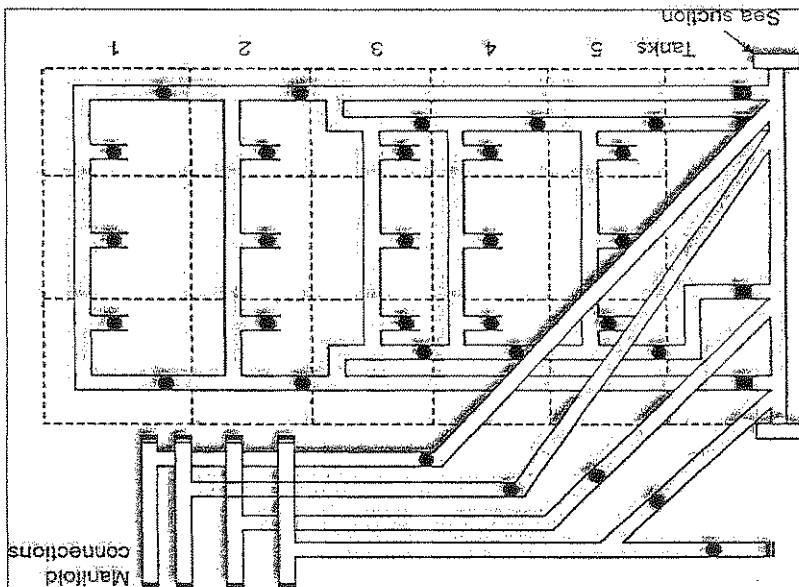
- b) Define the following maritime terminology: (10 marks)

- i. Copra (2 marks)
- ii. High density cargoes (2 marks)
- iii. Jumbo Derrick (2 marks)
- iv. Moisture migration (2 marks)
- v. Coal slurry (2 marks)

b) The IMDG Code is the recognized code of practice for the carriage of hazardous cargoes and is covered by four volumes, plus a supplement. Analyze FIVE (5) Shipping Procedure for the loading and transporting hazardous goods (15 marks)

a) There are three basic types of pipeline systems, Direct System, Ring Main System and Free Flow System. Differentiate the advantages and disadvantages of ring main system (10 marks)

Figure 1: Ring main system



QUESTION 3

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END OF QUESTION

- i. Cargo manifest (3 marks)
  - ii. Certificate of Fitness (3 marks)
  - iii. Mate's Receipt (3 marks)
  - iv. Enclosed space entry permit (3 marks)
  - v. Transportable Moisture Limit Certificate (3 marks)
- b) Define the following cargo documentation: (15 marks)

- a) All dangerous goods intended for carriage by sea must conform to the specifications and performance tests as recommended by the IMDG Code. Analyze FOUR (4) precautions elements when loading/discharging hazardous goods. (10 marks)

QUESTION 5

- a) Justify FOUR (4) improvement features in Ro-Ro ship stability. (10 marks)
- b) There are many container types in operation to suit a variety of trades and merchandise. Describe FIVE (5) types of containers which normally used in shipping. (15 marks)

Modern Ro-Ro shipping has experienced some painful losses over the years, the most notable being the Herald of Free Enterprise (1987) the Estonia (1994) and more recently the Tricolour (2003) with 2800 cars, and the Hyundai No. 105 (2004) with more than 4000 vehicles on board. Clearly, the losses and subsequent salvage operations have rocked the marine insurance markets generating tighter legislation to cause improved conditions on Ro-Ro vessels.

QUESTION 4

