



# TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL & AUTOMOTIVE ENGINEERING

**UNIVERSITY EXAMINATION FOR:**

**DIPLOMA MARINE ENGINEERING**

**EMR 2119 : MARINE ENVIRONMENT PROTECTION II**

**END OF SEMESTER EXAMINATION**

**SERIES: APRIL 2016**

**TIME: 2 HOURS**

**DATE: Pick Date May 2016**

## Instructions to Candidates

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of **FIVE** questions. Attempt any **THREE** questions.

**Do not write on the question paper.**

## **Question ONE:**

- a) Write in full the following abbreviations: i) IAPP certificate  
ii) EIAPP certificate **4 marks**
- b) Explain the types of surveys carried out under Annex VI of MARPOL 73/78 **6 marks**
- c) Referring to Annex VI of MARPOL 73/78, explain the Health and environmental effects associated with marine diesel engines: NO<sub>x</sub> and SO<sub>2</sub> emissions. **10 marks**

## **Question TWO:**

- a) Define the following terms as used in Annex I of MARPOL 73/78
- i) Oil
  - ii) Oily mixture
  - iii) Oil fuel
  - iv) Oil tanker
  - v) Combination carrier **10 marks**

- b) State any 6 operations that when completed on tank-to-tank basis must be recorded in the Oil record book. **6 marks**
- c) State the Surveys and Inspections done to Ships, as indicated in Annex I of MARPOL 73/78 **4 marks**

**Question THREE:**

- a) Define the following terms, as indicated in Annex II of MARPOL 73/78;
- i) Chemical Tanker
  - ii) Liquid Substances
  - iii) Clean Ballast
  - iv) Segregated Ballast **8 marks**
- b) Explain the categorization of Noxious Liquid Substances, as shown in Regulation 3 of Annex II of MARPOL 73/78 **8 marks**
- c) State any FOUR operations that once completed must be recorded in the Cargo Record Book. **4 marks**

**Question FOUR:**

- a) Explain the FOUR surveys done to Ships, as explained in Regulation 10 of Annex II of MARPOL 73/78 **12 marks**
- b) Explain the conditions under which the International Pollution Prevention Certificate shall cease to be valid. **8 marks**

**Question FIVE:**

- a) Define the following terms, as shown in MARPOL 73/78:
- i) New ship
  - ii) Existing ship
  - iii) Sewage
  - iv) Holding tank
  - v) Garbage **5 marks**
- b) Write in full the following abbreviations:
- i) ISPP Certificate
  - ii) IMDG Code
  - iii) IMO **6 marks**
- c) Explain THREE major reasons that Regulations 3, 4 and 5 of Annex V on Regulations for the Prevention of Pollution by Garbage shall NOT apply. **9 marks**