



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_x and SO₂ 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**