

**INDIAN MARITIME UNIVERSITY**  
(A Central University, Government of India)

May/ June 2017 End Semester Examinations  
**Diploma in Nautical Science- Second Semester**  
(AY 2015 batch onwards)

**MARPOL & Marine Engineering Knowledge (UD11T3205)**

Date : 20.06.2017

Maximum Marks: 70

Time: 2 Hrs

Pass Marks : 35

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**Section-A**  
**MARPOL**

**Note: Answer any 2 out of 3 Questions given.**  
**All questions carry equal marks.**

1. **(5 x 2 =10 Marks)**
  - a. What entries to be made in Oil Record book part II as per Annex I?
  - b. State the discharge criteria from a Machinery Space bilges inside special area for Annexure - I.
  
2. **(5 x 2=10 Marks)**
  - a. Explain types of ships required to carry Placards, Garbage Management plan And Garbage record keeping.
  - b. Explain the criteria for Sulphur content outside emission control area as per Annex VI.
  
3. Write short note on the following **(2 x 5 = 10 Marks)**
  - a. SMPEP
  - b. Marking and Labeling
  - c. Provisions regarding discharge of sewage into the sea.
  - d. List special areas as per annex V
  - e. As per BW convention state the Ballast water exchange requirements.

**Section-B**  
**Marine Engineering Knowledge**

**Note: Answer any 5 out of 6 Questions given.**  
**All questions carry equal marks**

4. **(5 x 2 = 10 Marks)**  
a. Differentiate between 4 stroke and 2 stroke cycle engines  
b. Explain the terms (i) power stroke (ii) Exhaust stroke
5. **(5 x 2 = 10 Marks)**  
a. With a neat sketch explain working of reciprocating pump  
b. Differentiate between displacement and centrifugal pumps.
6. **(5 x 2 = 10 Marks)**  
a. With a neat sketch explain working of relief valve  
b. Differentiate between Globe valve and Gate valve
7. **(5 x 2 = 10 Marks)**  
a. With a neat sketch explain working of oily water separator  
b. Write short notes  
    i. Demister of fresh water generator  
    ii. Air ejector of fresh water generator.
8. **(5 x 2 = 10 Marks)**  
a. Explain purpose of  
    1. Incinerator  
    2. Purifier  
b. Write short note on  
    1. Air conditioning plant  
    2. Sewage Treatment plant.
9. **(5 x 2 = 10 Marks)**  
a. Explain advantages of four ram steering gear system  
b. List out advantages of hydraulic system over pneumatic system

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