

**INDIAN MARITIME UNIVERSITY**  
(A Central University, Government of India)  
**End Semester Examination Dec 2019/Jan 2020**  
**B.Sc. (Nautical Science)**  
**Semester -III**  
**UG21T2310- Ship Operation Technology Paper - III**

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**Date: 17.12.2019**

**Max Marks: 70**

**Time: 3 Hours**

**Pass Marks: 35**

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Note: **Question No. 1 is compulsory.**

Answer any 6 from remaining 7 questions, all carry 10 marks each.  
Scientific calculator is permitted if required.

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1. Explain the following: (5x2=10 marks)
    - a. Joining shackle
    - b. Abandon ship
    - c. Enclosed space
    - d. Spontaneous combustion
    - e. Turning circle
  
  2. a. Describe muster list and its contents. (2x5=10 marks)  
b. Write down the "personal protective equipment" which are used on board ship for safety.
  
  3. a. Describe chemistry of "fire triangle". (2x5=10 marks)  
b. Describe effects of current and wind on ship when ship is on mooring.
  
  4. Write Short notes of the following: (5x2=10 marks)
    - a. Halyard at dip
    - b. Half mast
    - c. Courtesy flag
    - d. Quarantine flag
    - e. Pilot flag
  
  5. Describe the procedure for (2x5=10 marks)
    - i. Lowering of life boat.
    - ii. Lowering of life raft.
  
  6. What is fire man's outfit? List down the equipment associated with it. (10 marks)
  
  7. Write notes on the following: (2x5=10 marks)
    - a. Fall Prevention Device (FPD) and its purpose.
    - b. Starting procedure of Emergency fire pump.
  
  8. Explain the following: (2x5=10 marks)
    - a. Safety precautions during vessel's mooring operation in port.
    - b. Types of life boat and various parts of life boat.
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