#### **Indian Maritime University**

(A Central University, Govt of India)

# End Semester Examinations- June-July 2019 B.Tech (Marine Engineering) Semester – VI

**Ship Fire Prevention & Control (UG11T2601)** 

Duration: 3 Hrs Max Marks: 100
Date:24-06-2019 Pass Marks: 50

### Part A

(10x 3= 30 Marks)

#### **Compulsory Questions**

- 1. a) Brief about Fire Control Plan and its locations on ship.
  - b) Explain the importance of isolating valve fitted in fire line between machinery space and deck. State its location.
  - c) Describe any rate of rise temperature detector fitted on board ships?
  - d) What all items should Firefighter outfit should contain?
  - e) Explain the purpose of fire drill.
  - f) Define EEBD and its location.
  - g) Which type of fire extinguisher can be used in Engine Control Room. with the reason for using the same?
  - h) What is a fire damper and where it is fitted?
  - i) State the reasons why the water jet can not be used as extinguishing agents on Class B fire.
  - j) As per the SOLAS, What are the location and requirements of Emergency Fire Pump?

## PART B (5X14=70 Marks) (Answer any FIVE of the following)

- 2. (a)Draw a neat sketch of high pressure fixed CO2 fire fighting system of engine room and label the parts. (8 Marks)
  - (b)What are the precautions to be taken before releasing CO2 to the Engine Room? (4 Marks)
  - (c)What are the safety provided for CO2 Bottle Room? (2 Marks)
- 3. (a)As per SOLAS regulation, write the specifications of Class A 60 Bulkhead. (7 Marks)
  - (b) Explain standard Fire Test. (7 Marks)

- 4.(a)Describe the classes of fire with examples. (8 Marks) (b)How the spread of fire takes place by conduction, convection and radiation onboard. (6 Marks)
- 5. Name the various teams in a ship organisation during fire emergency situation mentioning in the members present, duties, functions and muster locations of each team. (14 Marks)
- 6.(a)What are the fire safety precautions in tankers during working with respect to static electricity, tools used, lighting and electric fitting and auto ignition. (8 Marks)
  - (b)What are the limitations of oil used as a fuel described in Solas Chapter: II/2, Regulation 4. (6 Marks)
- 7. (a)Draw and explain the principal of operation of any one type of Smoke Detector. (7 Marks)
  - (b) With a neat sketch, explain the requirement for an International Shore Connection. (7 Marks)
- 8. (a)What is the Solas Requirement for Sprinkler System in accommodation space. (4Marks)
  - (b)Sketch and describe the functioning of automatic sprinkler System. (8 Marks)
  - (c) State the advantages of this system. (2 Marks)

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