

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

Sixth Semester – B.Tech(Marine Engineering)  
Upto 2013 Batches

Ship Fire Prevention & Control  
Sub Code : UG11T1601

Time : 3 Hrs  
Date : 08.12.2015

Max Marks-100  
Pass Marks-50

**Part-A (10x3=30 Marks)**  
**Compulsory Questions**

1.
  - a) Fireman's outfit should be consisting of what all items and number of outfits required on the basis of tonnage?
  - b) Explain spontaneous combustion.
  - c) State the intervals of fire drills in cargo ship and in passenger ship as per SOLAS.
  - d) Sprinkler head bulbs are colored Red, Yellow and Green---state their temp ratings and locations where they are used.
  - e) Explain the phenomenon of boil over.
  - f) What is fire triangle and fire tetrahedron?
  - g) What is fire damper?
  - h) Write short notes on EEBD.
  - i) As per SOLAS state the locations and requirements of Emergency fire pump?
  - j) What type of portable fire extinguisher can be used in ECR and reason for that?

**Part-B ( 5x14 = 70Marks)**  
**Answer any five of the followings.**

2. (a) Sketch and describe the fixed installation of CO<sub>2</sub> extinguishing System. 7
  - (b) What are the advantages of fixed CO<sub>2</sub> installation? 3
  - (c) What periodical maintenances are to be carried out? 4
3. (a) What is hydrogen fire? 3
  - (b) State different stages of Exhaust Gas Boiler fire. 4

(c) State the actions are to be taken to prevent occurrence of EGB fire and how to fight this type of fire?	7
4. (a) Explain the purpose of fire drills.	4
(b) What is the formation of Emergency teams and their duties?	6
(c) As a watch keeping engineer what precautions you will take to prevent the occurrence of fire in various locations of the Engine Room?	4
5. (a) What is the SOLAS requirement for Sprinkler system in accommodation Space?	4
(b) Sketch and describe the functioning of automatic sprinkler System.	8
(C) State the advantages of this system.	2
6. (a) What is the function of fire detectors on board a ship?	4
(b) Sketch and describe an ionization chamber type of smoke detector.	6
(c) Describe the procedures for testing.	4
7. (a) What is fire control plan? Describe its utility and storage location	6
(b) sketch and describe an international shore coupling.	8
8 (a) With a neat sketch explain the operation of an advanced type of portable Foam extinguisher.	10
(b) Write about the safeties provided in a portable type extinguisher.	4

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