

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

**May/June 2016 End Semester Examinations**  
**B.Tech. (Marine Engineering)**

**Sixth Semester – Ship Fire Prevention and Control (UG11 T1601/UG11T2601)**

**Date : 09.06.2016**

**Time: 3 Hrs**

**Max Marks: 100**

**Pass Marks: 35**

**PART-A**

**(3 x 10 = 30 Marks)**

**Compulsory Question**

- 1) a) What are the items shown in a Fire Control Plan? It should be written in what language?
- b) Explain a fire triangle and fire tetrahedron.
- c) What is a Class A division bulkhead as per SOLAS?
- d) With reference to SOLAS, explain the location and requirements of the emergency fire pump?
- e) Explain the term BOIL OVER.
- f) What are the dimensions of an international shore coupling.
- g) What are the expansion ratios of low, medium and high expansion foam?
- h) Explain the composition of Engine room emergency team and their duties.
- i) What is the rate of rise of Temperature-detector fitted on board ships?
- j) Explain the importance of isolating valve fitted in water line between machinery space and deck. State its location

**PART - B**

**(5 x 14 = 70 Marks)**

**Answer any five of the followings**

- 2) (a) Sketch and describe a high pressure water spray fire fighting system used in accommodation spaces
- (b) How the system is tested for its operation? (10+4)
- 3) What is the function of fire detectors on board a ship? Sketch and describe an ionisation chamber type of smoke detector and explain how it would be tested. (14)
- 4) Sketch and describe the portable dry powder extinguisher, its usage, maintenance and recharging procedure. (14)
- 5) a) Draw a neat sketch of Fixed CO<sub>2</sub> Fire fighting system for Engine Room and label the parts.
- b) What are the precautions to be taken before releasing CO<sub>2</sub> in to Engine room?
- c) What is the annual maintenance to be carried out on the Fixed CO<sub>2</sub> system? (8+4+2)
- 6) a) Draw and explain the IG System, using Boiler Flue Gas for an oil tanker.
- b) What are the Trips and Alarms of IG system as per SOLAS. (10+4)
- 7) a) Explain in detail about the safety meetings held onboard.
- b) What are the duties of a watch keeping engineer to prevent fire hazard.
- c) Explain the term Hot Work Permit. (4+6+4)
- 8) a) Distinguish between EEBD and SCBA.
- b) List the components of Fireman's outfit.
- c) Give difference between Fireman's outfit and TPA. (6+4+4)

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