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***B. Tech. Degree VI Semester Examination in  
Marine Engineering June 2016***

**MRE 1603 SHIP FIRE PREVENTION AND CONTROL**

Time: 3 Hours

Maximum Marks: 100

(5 × 20 = 100)

- I. (a) What do you understand by “Fire Chemistry”? (5)  
 (b) Write short notes on (i) spontaneous combustion (ii) classification of fire and explain the fire extinguisher used for each class of fire. (15)

**OR**

- II. (a) Explain the principles of fire fighting with the help of a figure of tetrahedron. (10)  
 (b) Explain the limits of inflammability and the importance of the same. (10)

- III. (a) What are the safety and fire protection to be taken for electrical installation onboard? (10)  
 (b) Write short notes on (i) means of escape (ii) ventilation and venting system used for tankers. (10)

**OR**

- IV. (a) Explain the requirements in respect of materials of construction and design of ships as per SOLAS convention. (12)  
 (b) Describe in detail “Fire doors and fire zones”. (8)

- V. State the different types of fire detectors used on board ships and explain with sketches any two types of smoke fire detectors used on board ships. (20)

**OR**

- VI. Explain in detail the fire safety precautions to be taken in cargo ships and tankers during working. (20)

- VII. (a) Write short notes with sketches (i) international shore connection (ii) CO<sub>2</sub> portable type fire extinguisher. (10)  
 (b) Sketch and describe fixed type of dry chemical powder fire extinguishing system used on board gas tankers. (10)

**OR**

- VIII. (a) Sketch and describe fixed fire extinguishing system, sprinkler type, used in the accommodation area of ships. (10)  
 (b) Explain with a sketch a typical inert gas plant used onboard oil tankers. (10)

- IX. (a) Write short notes on (i) firefighting in port and dry dock (ii) fire organization on ships. (10)  
 (b) Describe the special precautions taken for prevention/fighting fire in chemical carriers. (10)

**OR**

- X. (a) Explain the procedure followed for re-entry into engine room after putting off the fire by flooding carbon dioxide. (10)  
 (b) Explain the importance of mustering and conducting boat and fire drill on board ships. Draw a typical boat drill plan and fire drill plan of a ship. (10)