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***B. Tech. Degree VI Semester Examination in
Marine Engineering June 2015***

MRE 603 SHIP FIRE PREVENTION AND CONTROL

Time: 3 Hours

Maximum Marks: 100

(5 × 20 = 100)

- I. Enumerate supporting factors for occurrence of fire. Explain fire triangle. What are the precautions to be taken to prevent fire hazard on board? (20)
- OR**
- II. Draw a line diagram of fire main installed on board ship showing fire pump and emergency fire pump. Draw a male and female coupling of a fire hydrant. (20)
- III. Sketch and describe types of fire detector heads fitted with fire alarm circuits in a ship and discuss advantages and disadvantages of each type. (20)
- OR**
- IV. Sketch and explain venting systems used for oil tankers. Describe briefly requirements on fire fighting system as per SOLAS convention. (20)
- V. Explain the operation of fixed CO₂ fire fighting system of a ship's engine room. What are the safety precautions to be taken before flooding CO₂ in the engine room? (20)
- OR**
- VI. Explain the sprinkler system fitted on passenger ships for fire fighting. (20)
- VII. (a) Explain international shore connection with a neat sketch. (10)
(b) Describe the function of a breathing apparatus. Which are the different types of breathing apparatus used on board ship? (10)
- OR**
- VIII. (a) Draw a neat sketch of a dry powder fire extinguisher and explain its operation and maintenance. (10)
(b) Write the procedure in detail on testing and recharging of any one type of portable fire extinguisher. (10)
- IX. Describe the method of fighting fire in the accommodation of a ship. What are the precautions to be taken before and after fire fighting? (20)
- OR**
- X. Write short notes on: (20)
- (i) Emergency fire pump.
(ii) Crew muster.
(iii) Fireman's outfit.
(iv) Fire plan.