

B.Tech Degree VI Semester Examination in Marine Engineering May 2012

MRE 603 SHIP FIRE PREVENTION AND CONTROL

Time : 3 Hours

Maximum Marks : 100

- I. (a) What is spontaneous combustion? (6)
- (b) Explain in detail the classification of fires and the types of extinguishers used for each type along with its advantages and disadvantages. (14)

OR

- II. Write short notes on:
- (i) Fire tetra hedron (6)
- (ii) Limits of flammability (6)
- (iii) Advantages of vapour fire extinguishers and their suitability for ship's use. (8)

- III. (a) Why are fire tests carried out and how are they done? (6)
- (b) Describe in detail Fire and Safety precautions to be taken on electrical installations on board a ship. (14)

OR

- IV. Sketch and describe the ventilation system and venting system used in oil tankers. (20)
- V. Explain in detail the safety precautions against fire to be taken on cargo ships and tankers during working. (20)

OR

- VI. (a) Describe the different types of detectors used on board ships. (8)
- (b) Sketch and explain the different types of smoke detectors used in a ship. (12)

- VII. Write short notes on any **FOUR**: (4 x 5 = 20)
- (i) International shore connection
- (ii) Fire appliance survey
- (iii) Dry chemical powder extinguisher (portable)
- (iv) Bulk carbon dioxide extinguishing system
- (v) High expansion foam system.

OR

- VIII. (a) What are the different methods of fixed fire installations used on board ships? (6)
- (b) Sketch and explain a mechanical foam type fixed fire fighting system used on a tanker. (14)

- IX. Write short notes on:
- (i) Fire organization on board a ship (6)
- (ii) Fire fighting in port and dry dock (6)
- (iii) Techniques used for extinguishing fire in machinery space. (8)

OR

- X. (a) Explain the special precautions to be taken for fighting fire in a chemical tanker. (10)
- (b) Describe with the help of a sketch the dry chemical powder extinguishing system used in a gas tanker. (10)