



BT MRE – VI – 08 – 029

B. Tech Degree VI Semester Examination in Marine Engineering, November 2008

MRE 603 SHIP FIRE PREVENTION AND CONTROL

Time : 3 Hours

Maximum Marks : 100

- I. What is a fire triangle? Explain in detail the types of fires on a ship and how the fires are extinguished using different extinguishing agents. (20)
- OR**
- II. Sketch a line diagram of a cargo ship Fire Main showing the fire pump and emergency fire pump. Explain why the emergency fire pump is located outside the engine room. (20)
- III. Explain in detail the different fire detection methods used on ships and how the detectors are tested. (20)
- OR**
- IV. Sketch and describe different types of fire detector heads fitted in the fire alarm circuits and explain the advantages and disadvantages of each type. (20)
- V. Describe with a line diagram a fixed CO₂ fire fighting system for an engine room. Explain the safety precautions to be taken before releasing CO₂ into the engine room. (20)
- OR**
- VI. Describe with a line diagram the automatic sprinkler system for fire fighting on a passenger ship. Explain the functioning of the sprinkler head in the accommodation with a sketch. (20)
- VII. Sketch and describe a mechanical foam fixed fire fighting installation for machinery spaces. Explain how the mechanical foam is produced in the system. (20)
- OR**
- VIII. Write short notes on ***any four*** of the following : (20)
- (i) International shore connection
 - (ii) Breathing apparatus
 - (iii) Dry powder fire extinguisher
 - (iv) Soda-Acid portable fire extinguisher
 - (v) Emergency fire pump
 - (vi) Testing and re-charging of fire extinguishers.
- IX. What are the precautions to be taken to prevent the outbreak of a fire in an engine room? If there is a fire near the main exit from the engine room how can you come out? (20)
- OR**
- X. Explain in detail about the fire drills on ships and how a fire in the engine room is fought by the team work of ship staff. What are the safety precautions to be taken before re-entry after putting off a fire in the engine room? (20)