

B.E./B.TECH.-Degree Examination, December 2020
Seventh Semester
MR16005-SHIPS FIRE PREVENTION AND FIRE CONTROL
(Regulation 2016)

Time: Three hours

Maximum : 80 Marks

Answer **ALL** questions

PART A - (8 X 2 = 16 marks)

1. Accommodation areas are fitted with
 1. Heat sensors 2. Flame sensors 3. Smoke sensors 4. None of the above
2. Chemical tanker pump rooms are provided with
 1. Insulated electrical fitting 2. Intrinsically safe electrical fittings
 3. Double coated insulation electrical fittings 4. None of the above
3. International shore coupling is used
 1. When the ship is at sea 2. When the ship is in dry dock 3. When the ship is sailing at foreign port. 4. None of the above.
4. Class A fire extinguished by
 1. CO2 portable extinguisher 2. Foam type extinguisher 3. Water type extinguisher
 4. None of the above.
5. Write the purpose of fire sensors onboard chemical tankers.
6. What is SCBA? At what minimum pressure the safety whistle sounds.
7. What is fire drill? How often it is conducted onboard ship as per SOLAS?
8. What type of portable fire extinguisher kept near the boiler? Why?

PART B - (4 X16 = 64 marks)

09. (a) (i) Before entering in to pump room of chemical tanker, list out the precautions to be taken by a marine engineer. (6)
- (ii) Why the fire plan to be placed in the bridge and both side of out the deck? What is the information you will find in the fire plan of oil tanker? (8)
- (iii) What type of ventilation provided in engine room of bulk carrier? (2)
- (OR)**
- (b) (i) How will you divide the ship fire zone? Explain the complete system with all types of sensors and how it is routed through circuits? (8)
- (ii) Sketch and describe the working principle of flame sensor used onboard container ship. (8)

10. (a) (i) In VLCC, how the complete ship is protected against fire? What is SOLAS regulation for emergency fire pump? (8)
- (ii) In chemical tanker, how will you handle the major fire in engine room? How will you make a re-entry in to it? (8)

(OR)

- (b) (i) As marine engineer if you find the fire in boiler platform, what will be your action? How will you extinguish it? (8)
- (ii) With the help of drawing, explain the CO2 portable fire extinguisher. (8)
11. (a) (i) When the ship is in dry dock, what precaution is required to prevent fire onboard your ship? (8)
- (ii) How to prevent accommodation fire of ore carrier? (8)

(OR)

- (b) (i) On board bulk carrier, how the cargo holds monitored against fire? What kind of fire protection system provided? (8)
- (ii) Explain the working principle of high foam expansion system used in chemical tanker. (8)
12. (a) (i) How the electric shocked casualties to be treated from enclosed space? (8)
- (ii) What is CPR? How will you treat unconscious person onboard ship? (8)

(OR)

- (b) (i) Explain the safe working practice maintained in engine room of offshore vessels. (8)
- (ii) How will you maintain engine room against fire in offshore vessel and what all are the precaution to be taken to prevent fire in the engine room? (8)