Indian Maritime University
(A Central University, Govt. Of India)
End Semester Examination Dec-2019/Jan-2020
B. Tech(Marine Engineering)
Semester -VI
Ship Fire Prevention & Control
(UG11T1601/2601)

Date:30-12-2019 Max Marks:**70**
Time:3 Hrs Pass Marks: **35**

Part – A (compulsory)

Answer the following (10x2=20 Marks)

1. Name class of fire & suitable extinguishing agent against each of these fire: Furniture (wooden/plastic), Lubricating oil, Control panel, Magnesium powder.

2. Explain Spontaneous combustion.

3. What is EEBD? As per FSS code what is its minimum service duration?

4. With respect to foam fire extinguishing agent, explain: Expansion ratio & Drainage time.

5. What is isolation valve in fire water line? Where is it located?

6. Differentiate between explosion proof and intrinsically safe equipment.

7. What is the SOLAS requirement for ventilation of cargo pump room?

8. Explain the purpose of dip tube in a CO2 portable fire extinguisher.

9. Define a rate of rise of temperature detector.

10. What should be your action when you discover a fire in a compartment in engine-room.

Part – B

Answer any 5 out of 7 questions (5 x 10= 50 marks)

11. (a) What is fire? Explain chemistry of fire. (3)
    (b) Define flash point and ignition temperature. (2)
    (c) Describe health hazards associated with fire due to heat, Depletion of oxygen and Harmful gases. (5)

12. (a) As per FSS code What is the definition of portable fire Extinguisher & state various information provided on its body. (2+3)
    (b) Sketch and label any portable fire extinguisher. (5)

13. (a) What is the importance of International shore coupling. Draw International shore coupling with dimensions. (1+4)
(b) Describe a fire control plan. In which language it is written. (4+1)

14. (a) As per SOLAS What is the Specifications for class “A” & class “C” bulkhead. (6)
(b) Define following: standard fire test, Central control station (2+2)

15. (a) Draw and label a fixed fire CO2 installation for engine room. (6)
(b) What is a time delay system? (2)
(c) State the location of bursting disc & relief valve in fixed. CO2 installation. Why are they provided? (2)

16. (a) Draw & label a block diagram of IG system from boiler flue gas.(5)

(b) What are the alarms and shut down safety, provided in the system. (3)
(c) Draw and explain wet deck seal. (2)

17. (a) What are the heat sources which may cause fire on board a Ship. (2)
(b) Make a detailed list of good practices on board to Prevent outbreak of fire. (5)

(c) What routine checks & tests carried out on fire detection & alarm system to ensure proper operation. (3)

******