

Indian Maritime University

(A Central University, Govt of India)

May-June 2018 End Semester Examinations

B. Tech (Marine Engineering)

Semester-VI

SHIP FIRE PREVENTION AND CONTROL (UG11T2601/1601)

Date: 08.06.2018

Max Marks:100 Marks

Time: 3 Hrs

Pass Marks: 50 Marks

PART-A

(10X3=30)

(All Questions are Compulsory)

1. a) What is Fire triangle and Fire Tetrahedron?
- b) Define- Spontaneous combustion.
- c) What is meant by Emergency escape and where it is located?
- d) Define - Intrinsically safe electrical equipment on tankers
- e) What is Class – A division bulkhead as per SOLAS?
- f) List out different types of FIRE detectors
- g) What is FSS Code?
- h) What is the capacity of emergency fire pump as per SOLAS requirement?
- i) Define-EEBD and its location.
- j) What are the items shown in a Fire Control Plan?

PART – B

(5 X 14=70)

(Answer any FIVE of the following)

2. How FIRE is classified? Explain clearly with suitable example.(14 Marks)
3. (a) Describe a Standard fire Test for Class "A-60" and Class"B-15" division bulkhead as per SOLAS. (8 Marks)

- (b) What are the limitations of oils used as fuel described in SOLAS-Chapter: II/2, Regulations 4. (6 Marks)
4. (a) Write briefly about 'Fire Door' & 'Fire Zone'. (6 Marks)
(b) Explain clearly the working principle of " Ionization chamber combustion products detector" with a neat sketch. (8 Marks)
5. (a) Draw any one of the flame detectors and explain its working principle. (7 marks)
(b) How CO₂ cargo space flooding with smoke detection system is working in General Cargo vessel? (7 Marks)
6. (a) Draw a neat sketch of Fixed CO₂ Fire fighting system for Engine Room and label the parts. (8 Marks)
(b) What are the precautions to be taken before releasing CO₂ in to Engine room? (3 Marks)
(c) List out the "Fireman's outfit" items. (3 Marks)
7. (a) Sketch and describe the portable dry powder fire extinguisher and its usage (8 Marks)
(b) With a neat sketch explain the requirement for an International Shore Coupling (6 Marks)
8. Write short notes on the following (14 Marks)
- (i) Fire Drill
 - (ii) Contingency Plan
 - (iii) Fire Dampers
 - (iv) Muster List
 - (v) Fire Control Plan