

COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY

B. TECH. DEGREE VI SEMESTER EXAMINATION IN MARINE ENGINEERING JUNE 2020

MRE I603 SHIP FIRE PREVENTION AND CONTROL (2013 Scheme)

Time: 2hrs 30 Minutes [30 Minutes for Answering and Scanning/Uploading the page of the Answer Sheet per module]

Max. Marks: 70 (14 per module)

INSTRUCTIONS

1. You have to be available in Google Meet on demand by the faculty.
2. You have to share your 'live location' to the faculty before uploading the answer sheet.
3. You have to answer only one question.
4. Answer may not exceed one page of an A4 size paper in a standard handwriting, as far as possible.
5. If at all an answer goes beyond one page, (due to your handwriting) another page can also be used. In such a situation, the page number should be given as 1/2, 2/2.
6. You have to put dated signature along with Register Number, Subject Code, Module/Group Number (as given in the Question Paper) in each page.
7. You have to put the Question Number correctly.
8. After answering the question, you have to scan and upload the answer page.

MODULE - I

(Answer *ANY ONE* question)

- I(1). Write short note on
- (a) Auto ignition and self-spontaneous ignition with ship related examples. (6)
 - (b) Explain Fire chemistry. (8)

OR

- I(2). (a) Advantages of vapors fire extinguishing over Foam extinguisher. (7)
- (b) Explain back draft , flash over and BLEVE with ship related example. (7)

MODULE - II

(Answer *ANY ONE* question)

- II(1). (a) Sketch and mark fire main system. How to isolate main fire and emergency fire pump? (7)
- (b) Explain fire zone classified in ship. (7)

OR

- II(2). Write short note on
- (a) Emergency escape route (4)
 - (b) Fire station and its controls (5)
 - (c) Statuary requirement of SCBA and safety checks on SCBA (5)

MODULE - III

(Answer *ANY ONE* question)

- III(1). (a) Explain major difference between conventional and addressable fire detection system? (4)
(b) Sketch and explain smoke detector. (5)
(c) Explain testing procedure for each detector and their frequency. (5)
- OR**
- III(2). (a) Sketch hyper mist system and mark the places under protection (7)
(b) Explain from your diagram hyper mist activation in automatic mode and local. (7)

MODULE - IV

(Answer *ANY ONE* question)

- IV(1). (a) Sketch and mark all the parts CO2 type of fixed fire installation used in engine room. (7)
(b) Explain the safety barrier provided for CO2 fixed firefighting system. (7)
- OR**
- IV(2). (a) Sketch and mark all the major parts inert gas plant. (6)
(b) Explain safeties on inert gas plant/system. (8)

MODULE - V

(Answer *ANY ONE* question)

- V(1). Enumerate fire fighting procedure
(a) Accommodation space (5)
(b) Machinery space (5)
(c) Paint store (4)
- OR**
- V(2). (a) Explain firefighting organization in ship. (6)
(b) Explain type A ship ventilation and cargo venting system to protect from fire. (8)
