

**COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**B.TECH. DEGREE IV SEMESTER EXAMINATION IN MARINE ENGINEERING  
JUNE 2020**

**MRE 1405 MARINE AUXILIARY MACHINERY I  
(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 per module .
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). Sketch the equipment layout suitable for machinery space of a large Ocean going vessel. Mark important equipments, tanks and escape routes in the layout. (14)
- OR**
- I(2). Explain the precautionary measures taken for bunkering Heavy Fuel oil for vessel. (14)

**MODULE - II**

(Answer *ANY ONE* question)

- II(1). (a) List safety features provided in 2 stage water cooled type main air compressor. (4)  
(b) Explain why fresh water generator should not be used to produce potable water near shore. (10)

**OR**

- II(2). (a) What are the uses of compressed air onboard a ship? (4)  
(b) What is the purpose of providing intercooler in a multi stage air compressor? Why Clearance volume is provided in a compressor? (10)

**MODULE - III**

(Answer *ANY ONE* question)

- III(1). Draw and mark parts of SDNR valve. (14)

**OR**

- III(2). (a) What is meant by Priming of filters? How it is done? (10)  
(b) What is a duplex filter? Where do we use it? (4)

**MODULE - IV**

(Answer *ANY ONE* question)

- IV(1). (a) What are the different watch schedules for an engineering watch? (4)  
(b) List important things to observe while taking over an Engine room watch. (10)

**OR**

- IV(2). What are the reasons for poor performance of a shell and Tube heat exchanger? (14)

**MODULE - V**

(Answer *ANY ONE* question)

- V(1). Mention the step by step procedure for de-sludging of a Heavy Fuel oil purifier. (14)

**OR**

- V(2). List the dangers involved and the precautionary measures to be taken before for making entry into an enclosed space. (14)

\*\*\*