

CBCS SCHEME

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18MR44

Fourth Semester B.E. Degree Examination, Jan./Feb. 2023

Ship Structure and Construction

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain with the help of a neat sketch the principal ship dimensions and terms used in ship construction. (14 Marks)
- b. With the help of a neat sketch explain the principal stresses acting on the ships wall. (06 Marks)

OR

- 2 a. Explain how hull plates and ship sections are prepared when building a ship. (10 Marks)
- b. List and explain the different types of welding used in ship construction. (10 Marks)

Module-2

- 3 a. Explain with the help of a neat diagram open floor and plate floor double construction. (15 Marks)
- b. Explain with the help of a neat diagram duct keels on ships. (05 Marks)

OR

- 4 a. Draw and explain the arrangement forward of the collision bulkhead in a ship. (13 Marks)
- b. Explain the bow thruster arrangement with a neat sketch. (07 Marks)

Module-3

- 5 a. Explain the shell plating arrangement and numbering system used in ship construction with the help of a neat sketch. (10 Marks)
- b. Explain the construction of hatch corners with a neat diagram. (10 Marks)

OR

- 6 a. Draw and explain the features of a watertight door. (10 Marks)
- b. Draw and explain the mid-ship section of a double bottom product tanker. (10 Marks)

Module-4

- 7 a. Explain the loadline marking on a ship with a neat sketch. (10 Marks)
- b. What is gross and net tonnage and explain what are the spaces required to calculate registered tonnage. (10 Marks)

OR

- 8 a. Explain the schematic layout of a dry dock and explain the flow. (15 Marks)
- b. Explain the 5 important points to ensure smooth and safe sea trials of a ship. (05 Marks)

Module-5

- 9 a. Explain the mid-ship cross section of a bulk carrier. (15 Marks)
- b. Explain the materials and their properties of insulation used for tanker in LNG vessels. (05 Marks)

OR

- 10 a. Draw and explain the mid ship cross section of a prismatic tank used in gas tankers. (13 Marks)
- b. Draw and explain OBO carriers with a neat sketch. (07 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.