

USN

--	--	--	--	--	--	--	--	--	--

Fifth Semester B.E. Degree Examination, June/July 2024 Ship Structure and Construction

Max. Marks: 100

Time: 3 hrs.

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

Module-1

- 1 a. Define welding. List the various types of welding. (07 Marks)
- b. Draw the longitudinal and transverse cross section of ship and explain various terms used in ship construction with reference to ship's parameters. (13 Marks)

OR

- 2 a. Explain manual metal arc welding with a neat sketch. (12 Marks)
- b. Define Hogging, sagging, racking, static and dynamic forces. (08 Marks)

Module-2

- 3 a. Sketch and describe web frames used in ship construction. (12 Marks)
- b. Identify and explain primary types of rudders used in ship construction. (08 Marks)

OR

- 4 a. Develop the construction technique for machinery space double bottom with a neat sketch. (10 Marks)
- b. Briefly explain the different types of sterns. (10 Marks)

Module-3

- 5 a. What is shell plating? Explain its importance with a classification diagram. (10 Marks)
- b. Model the design and application of hatch covers used in ship construction. (10 Marks)

OR

- 6 a. Describe about water tight bulkheads. (10 Marks)
- b. Examine the role and challenges of bulbous bows in ship design and performance. (10 Marks)

Module-4

- 7 a. Explain Plimsol/load line mark with a neat sketch. (12 Marks)
- b. Identify role of surveyors in construction of ship. (08 Marks)

OR

- 8 a. Plan an evaluation of the factors influencing ship freeboard regulations and their implications on vessel stability and safety in various maritime environments. (08 Marks)
- b. Draw a neatly labeled layout of a ship yard showing the process flow. (12 Marks)

Module-5

- 9 a. Construct a mid ship section of a bulk carrier. (10 Marks)
- b. What is a Ro-Ro vessel? Explain the features and advantages of Ro-Ro vessel. (10 Marks)

OR

- 10 a. Explain the process of surface preparations and painting a ship's hull. (10 Marks)
- b. Construct a mid ship section of a container vessel. (10 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.