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18MR44

## Fourth Semester B.E. Degree Examination, Feb./Mar. 2022 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 Define the following term with a help of neat sketch:
- Length between perpendicular
  - Length overall
  - Camber
  - Rise of floor
  - Tumble home
  - Free board
  - Depth extreme
  - Breadth moulded
  - Draught extreme
  - Depth moulded.

(20 Marks)

OR

- 2 a. With a neat sketch, explain the process of metal arc welding. (06 Marks)  
b. With a neat sketch, explain the different welding faults. (07 Marks)  
c. List the different testing methods to find welding faults. (07 Marks)

### Module-2

- 3 Sketch and label the following:
- Hawse pipe
  - Bitter end
  - Panting stringer
  - Longitudinally framed solid floor
  - Transversely framed bracket floor.

(20 Marks)

OR

- 4 a. What is meant by Keel? Explain with neat sketch the three different types of Keel. (07 Marks)  
b. What are the different types of rudder? How do you classify them? (06 Marks)  
c. Draw a simple sketch of rudder carrier bearing (07 Marks)

### Module-3

- 5 a. Sketch and explain horizontal type sliding water light door. (10 Marks)  
b. Explain what are the regulation in SOLAS for water tight door. (10 Marks)

OR

- 6 a. Draw a midship section of welded ship. (10 Marks)  
b. Sketch and explain shell and deck plating. With example explain how it is identified. (10 Marks)

**Module-4**

- 7 a. Sketch the Plimsoll load line marking carved on ship indicating its dimension and significance of each letter. (10 Marks)  
b. Explain the launching sequence of a vessel from shipyard considering the launch of a 75,000 tone bulk carrier. (10 Marks)

**OR**

- 8 a. Sketch a layout of ship yard. Name four types of ship launching methods. (10 Marks)  
b. List the things that need to be taken into consideration while planning a new shipyard. (10 Marks)

**Module-5**

- 9 Sketch and explain the constructional details of a bulk carrier. (20 Marks)

**OR**

- 10 a. Explain how antifouling system is working on board. (10 Marks)  
b. Explain the three corrosion prevention method used on ships. (10 Marks)

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