

**Indian Maritime University**  
**(A Central University, Govt of India)**  
**End Semester Examinations – June 2023**  
**Programme Name: B Sc (NS)**  
**Semester: 2**  
**Subject Code: UG21T5204**  
**Subject Name: SHIP CONSTRUCTION**

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Date: 31.05.2023

Max Marks: 70

Duration: 03 Hrs

Pass Marks: 35

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General Instructions

- (i) All Sections (A, B & C) are to be attempted.
- (ii) Options, if any, are specified in respective section.

**Section A**

Objective Type Questions (1x10=10 Marks)

1. Girders are used for strengthening of deck and double bottom tanks. True/False.
2. Panting Stringers are located in
  - a) D.B. Tanks
  - b) Wing tanks
  - c) Cargo oil tanks
  - d) Forepeak tanks
3. Bilge keel is connected to the ground bar by
  - a) Strong weld
  - b) Light continuous or intermittent weld
  - c) Butt weld
  - d) None of these
4. The term face, back and rake are associated with
  - a) Rudder
  - b) Propeller

- c) Bilge keel
- d) Anchor

5.----- takes the weight of the Rudder.

- a) Propeller
- b) Aft Peak Tank
- c) Hull
- d) Stern frame.

6. Non -Destructive test of welding is

- a) Tensile test
- b) Impact test
- c) Radiography
- d) None of the above

7. The corner of the hatch opening on deck is stiffened by

- a) Hatch end beam
- b) Hatch side girder
- c) Hatch coaming
- d) All of the above

8. The end part of the anchor chain is called -----

9. The height of the air pipes should be same throughout the ship.

- a) True
- b) False

10. The number of watertight bulkheads fitted on a ship of same length should be same.

- a) True
- b) False

### Section B

#### Short answer type questions (2X5=10Marks)

11. Write two advantages of welding over riveting ?
12. Explain the purpose of air pipes fitted in the tanks.
13. What is purpose of bilge keel ?
14. What are bulwarks and freeing ports?

15. Define the term pitch of a propeller?

**Section C**

**Answer all five questions (5x10 =50 marks).**

16.

- (a) List any five functions of water tight bulkhead? (5 marks)  
(b) Draw a longitudinally framed D.B tank of a bulk carrier. (5 marks)

17.

- (a) Sketch and label a stern frame . (5 marks)  
(b) Sketch and describe the construction of a water tight bulkhead. (5 marks)

18.

- (a) Sketch and label the panting arrangement at the fore end of the vessel. (5 marks)  
(b) Sketch and label a propeller (5 marks)

19.

- (a) Explain the arrangements to resist pounding. (5 marks)  
(b) What is the purpose of air pipe and ventilators. (5 marks)

20.

- (a) Describe the destructive and non-destructive tests which may be carried out on welding materials or welded joints. (5 marks)  
(b) Describe the support arrangements of rudders. (5 marks)

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