

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

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Date: 16.11.2023

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) **All the questions are compulsory.**

**Section A**

**Objective Type Questions (1x10=10 Marks)**

1. In ship construction frame spacing is
- a) Reduced at the bow and stern
  - b) Uniform throughout the length of the ship
  - c) Greater at the bow and stern
  - d) None of the above
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 -----

- a) Butter End
- b) Joining Shackle
- c) Bitter End
- d) Hawse pipe

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 irrespective of their type

- a) True
- b) False

**Section B**

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

- 11. Write any two advantages of Welding over Riveting?
- 12. Explain the purpose of Air pipes fitted in the tanks?
- 13. What is the purpose of bilge keel?
- 14. Describe Panama Fairlead?
- 15. Define the term pitch of a propeller?

**Section C**

**Answer all five questions. (10 Marks Each).**

16. Describe any two destructive and three non-destructive tests which may be carried out on the welding material or welding joint? (10 marks)

17. Sketch and label the transversely framed (Solid and bracket floors) double bottom tank? (10 marks)

18.

- a) Sketch and label a typical stern frame of the ship and explain. (5 marks)
- b) Explain how the weather tightness of the hatch covers are achieved? (5 marks)

19.

- a) Describe the pumping arrangement on tankers? (5 marks)
- b) Write short note on watertight doors? (5 marks)

20 List any 10 factors which a ship-owner should take into consideration for ship constructional requirements before placing the order for a new ship. (10 marks)

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