

Indian Maritime University
(A Central University, Govt of India)

Supplementary Examinations – September/October 2024

Programme Name: B Sc (NS)

Semester: 2

Subject Code: UG21T5204

Subject Name: SHIP CONSTRUCTION

Date: 13.09.2024

Max Marks: 70

Duration: 03 Hrs

Pass Marks: 35

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. Frames are numbered from:

- A) Fwd perpendicular

- B) Aft perpendicular
- C) Midships
- D) collision bulkhead

4. The term face, back and rake are associated with

- a) Rudder
- b) Bilge keel
- c) Propeller
- d) Anchor

5. Pitch of propeller is defined as

- a) Forward movement of propeller when rotated by 360 degree
- b) Forward movement of propeller in un-yielding medium when rotated by 360 degree
- c) Forward movement of propeller when rotated by 60 degree when the vessel is floating in water
- d) Forward movement of propeller when rotated by 360 degree and in sea water

6. Non -Destructive test of welding is

- a) Tensile test
- b) Impact test
- c) Radiography
- d) Break test

7. The corner of the hatch opening on deck is not stiffened by

- a) Hatch end beam
- b) Hatch side girder
- c) Hatch coaming
- d) Hatch cover

8. The shank of the anchor is connected with anchor chain by using -----

- a) Rope stopper
- b) Joining Shackle
- c) D Shackle
- d) sen house slip

9. What is distortion of a vessel's structure caused by rolling called

- (a) Racking
- (b) Slamming
- (c) Pounding
- (d) Heaving

10. What is the connectivity plate between a side frame and a transverse deckbeam called
- A) Girder
 - B) Gusset
 - C) Knee
 - D) Stiffener

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. Name any two types of stern ramps used on RORO ships and explain where they are fitted on the ships.

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 a forepeak 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. Describe the pumping arrangement on oil tankers.
- 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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