

Indian Maritime University

(A Central University, Govt of India)

End Semester Examinations – June 2026

Programme Name: B Sc NS

Semester: VI

Subject Code: UG21T5604

**Subject Name: Ship Manoeuvring & Collision
Prevention Regulations**

Date: 08.06.2026

Max Marks: 70

Duration: 03 Hrs

Pass Marks: 35

General Instructions

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

Section A

Ten MCQs/Fill in the Blanks of 01 Mark each – Choose the correct answer as applicable.

1. _____ is a pipe through which the anchor cable leads to the chain locker.

- a. Cable Pipe
- b. Hawse pipe
- c. Sterling pipe
- d. Spurling Pipe

2. _____ is the term to indicate lowering the anchor under power.

- a. Lower back
- b. Walk back
- c. lower down
- d. Walk down

3. _____ meters is about one shackle length of an anchor

- a. 20.7
- b. 24.7
- c. 27.4
- d. 20.4

4. _____ is the angle between ships fore and aft line & the tangent to turning circle at any given moment.

- a. Tactical angle
- b. Transfer angle
- c. Thrust angle
- d. Drift angle

5. _____ is one factor which influence the squat of a vessel

- a. Ships speed
- b. Density of water
- c. Draft of the vessel
- d. Turning circle

6. The Under Keel Clearance (UKC) of a vessel is the

- a) Difference between draught and free board
- b) Distance from the ship's keel to the seabed
- c) Difference between depth of water and height of tide
- d) Difference between height of tide and ship's draught

7. _____ involves the build-up of frozen sea water on ships.

- a. Ice blink
- b. Ice creation
- c. Ice accretion
- d. Ice breaker

8. Which vessel is the "Stand-on" vessel, when two power driven vessels are crossing?.

- a) The vessel which has the other on her own port side
- b) The vessel which has the other on her own starboard side.
- c) The vessel that is larger of the two vessels
- d) The vessel which has more speed

9. The area travelled by the parted rope having a force enough to kill a person on its way is known as _____

- a. Rope flying zone
- b. Snap effect zone
- c. Snap back zone
- d. Rope danger zone

10. On a vessel of 50 metres or more in length the forward anchor light shall be placed at a height of not less than _____ above the hull.

- a. 6 metres
- b. 12 metres.
- c. 4.5 metres
- d. Same as the breadth

Section B

Five Questions of 02 Marks each

11. Define directional stability.
12. State the dangers of mixed mooring systems.
13. How a Williamson turn is executed in a MOB situation.
14. State your actions in case of Steering Gear Failure
15. Explain the 3 category of ships classified as per Polar Code

Section C

Answer any 5 out of 7 questions, Each carry 10 Marks.

16. State the procedure for anchoring the vessel in deep water.
(10 marks)
 17. a) Explain the factors affecting turning circle of ships?(5 marks)
b) Define Safe Speed as per IRPCS Rule No-6, and factors to be taken into consideration for determining the same.
(5 marks)
 18. a) Describe procedures for Embarkation and Disembarkation of pilot.
(5 marks)
b) Define the terms " Transfer & Side Reach " with respect to ship manoeuvring
(5 marks)
 19. Explain what are the dangers associated with Ice accretion on ships and methods of mitigation and prevention
(10 marks)
 20. Explain factors which makes mooring area and operation dangerous and what is a snap back zone?
(10 marks)
 21. Define (Blind Navigation) navigation in restricted visibility and precautions that you need to take.
(10 marks)
 22. Define " Piracy " and describe precautions when navigating in Piracy prone area.
(10 marks)
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