

**Indian Maritime University**

**(A Central University, Govt of India)**

**End Semester Examinations – December 2024**

**Programme Name: B Sc (NS)**

**Semester: V**

**Subject Code: UG21T5501**

**Subject Name: Coastal Navigation & Collision Prevention Regulations**

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Date: 06.12.2024

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.

***QP setters to specify the following as applicable:-***

- (iii) BA Chart 2675 'English Channel' or equivalent to be provided
- (iv) Graph for tide calculation

**Section A**

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

1. Visibility of Masthead light of a Power driven Vessel < 12 miles
  - a) 5
  - b) 2
  - c) 3
  - d) 1
2. The difference between the height of a HW and the subsequent LW is called
  - (a) Height of Tide
  - (b) Range of Tide
  - (c) Duration of Tide
  - (d) Mean High Water
3. While planning the Passage Plan, the third step is Execution; one procedure is;
  - a) Checking the charts used for the voyage s corrected or not.
  - b) Gathering all information from the Nautical Publications
  - c) Passage Plan reviewed by Master
  - d) The condition and reliability of the vessel's navigational equipment

4. Data on paper charts required for a passage along with their editions is available in

- (a) NP 131
- (b) NP 133
- (c) NP 134
- (d) NP 136

5. Vessel proceeding Under sail when also propelled by machinery shall exhibit forward;

- a) A diamond shape
- b) A cone with apex pointing downwards
- c) Two cones with apex together
- d) Two cones with bases together

6. The stern light shall be positioned such that it will show from dead astern to how many degrees on each side of the stern of the vessel?

- (a) 135°
- (b) 112.5°
- (c) 67.5°
- (d) 22.5°

7. Dredger carrying out dredging operations during daytime will exhibit;

- a) Ball Diamond Ball in a vertical line
- b) Ball Diamond Ball in a vertical line, on the obstruction side one ball & on the clear side one diamond.
- c) Ball Diamond Ball in a vertical line, on the obstruction side two balls & on the clear side two diamonds.
- d) Ball Diamond Ball in a vertical line, on the obstruction side one ball, on the clear side one diamond, side lights & stern light.

8. Soundings indicated on charts are measured from

- (a) Mean Low Water
- (b) Mean High Water
- (c) Lowest Astronomical Tide
- (d) Highest Astronomical Tide

9. Leeway is applied to

- (a) Course Steered
- (b) Course Made Good
- (c) Set
- (d) Drift

10. A pilot vessel on pilotage duty in restricted visibility may in addition to the prescribed signals, sound an identity signal consisting:

- a) four short blasts
- b) one prolonged blast followed by two short blast
- c) three short blasts
- d) two prolonged blast followed by one short blast.

## Section B

Five Questions of 02 Marks each

11. What additional shapes and lights a mine clearance/mine sweeping vessel
12. Define Mean High Water Springs
13. What is the sound signals given by a towing vessel whose tow length is >200m in restricted visibility and the lights?
14. What information should be provided on every Waypoint?
15. Explain the following;
  - a) Range of tide
  - b) Duration

## Section C

Seven Questions of 10 Marks each of which any 05 questions to be answered.

16. At 1600 hours Start Point Light house bore  $253^{\circ}(T)$  and Berry Head Light bore  $325^{\circ}(T)$ . With an Engine speed of 14 knots, the vessel then steered a course to pass Pte de Barfleur 10 miles off to starboard counteracting a current setting  $220^{\circ}(T)$  at 3 knots. Find –

- (a) Vessels Position at 1600 hours (3 marks)
- (b) Speed Made Good (3 marks)
- (c) Course Steered (4 marks)

17. Find the height of tide at Bombay at 0300 hrs on the 01<sup>st</sup> March 1992 given the following data –

Bombay29/02	H.W 2238	3.7m
01/03	L.W 0453	1.9m
	H.W 1022	3.3m
	L.W 1610	1.2m

(10 marks)

18.

- (a) Describe how you will ascertain the Charts and Publications you will require to Plan a Voyage (5 marks)
- (b) List out any 5 publications you would refer before planning a passage (5 marks)

19. (a) Explain what you mean by a Wing In Ground Craft (WIG) vessel
- (b) Explain the sound signals in restricted Visibility by;
    - (i) Aground Vessel
    - (ii) Vessel Constrained by Draft
  - (c) Light signals exhibited by the following;
    - (i) Power driven vessel making way through the water > 50 m in length.
    - (ii) Vessel Restricted in her ability to manoeuvre making way
    - (iii) Vessel Not Under Command under way.

(10 marks)

20.

(a) Describe the lights and Shapes carried a vessel Not under Command

(b) Describe the lights and Shapes carried a vessel Constrained by her draught

(c) Describe the sound signal sounded by a vessel aground whose length is more than 100 meters in or near an area of restricted visibility

(3+3+4 = 10 marks)

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