

Indian Maritime University
(A Central University, Govt of India)
Supplementary Examinations – March/April 2025
Programme Name: B Sc (NS)
Semester: III
Subject Code: UG21T5304
Subject Name: Chart Work & Collision Prevention Regulations

Date: 21.03.2025

Max Marks: 70

Duration: 03 Hrs

Pass Marks: 35

General Instructions

- (i) All Sections (A, B & C) are to be attempted.
- (ii) Scientific Calculator is permitted.
- (iii) BA Chart 813 will be supplied by the Examination Centre

Section A

Fill in the Blanks/ Choose the correct answer as applicable – 10 Q of 01 Mark each

1. In a navigational chart, the date ofalong with the name of the Hydrographer to the Admiralty or Government authority is printed at the bottom, in the middle just outside the margin.
2. A small scale chart covers a large geographical area, whereas a large scale chart covers small geographical areas, such as harbours and anchorages. Medium scale charts are used in coastal navigation.
 - (a) True
 - (b) False
3. The Mercator projection is a cylindrical projection.
 - (a) True
 - (b) False
4. The Catalogue of Admiralty Charts and Publications (NP 131) is used to determine the charts and publications required for the passage.
 - (a) True
 - (b) False
5. Modern Admiralty surveys are planned for Chart Datum approximately equal to
 - (a) M.L.W
 - (b) M.L.W.N
 - (c) L.A.T
 - (d) L.W

6. If Variation is $8^{\circ}W$ and the Deviation for the Ship's head is $4^{\circ}W$, then the Compass error will be :
- (a) $12^{\circ} W$
 - (b) $4^{\circ}E$
 - (c) $4^{\circ} W$
 - (d) $12^{\circ}E$
7. Deviation varies in name and amount, as the ship's head turns in azimuth
- (a) True
 - (b) False
8. Nominal and luminous range of a light is the same when meteorological visibility is 10 nms.
- (a) True
 - (b) False
9. As per Rule 6 of COLREGS, every vessel at all times proceed at a
- (a) Safe draft
 - (b) Safe course
 - (c) Safe Speed
 - (d) Slow Speed
10. Risk of collision shall be deemed to exist if the compass bearing of two vessels does not appreciably change.

Section B

Five Questions of 02 Marks each (5 x 2 marks = 10 marks)

11. What is Chart Datum ? Briefly explain
12. State two disadvantages of Mercator projection
13. In respect of Traffic Separation Scheme differentiate between 'Separation Zone' and 'Inshore Traffic Zone'.
14. If the height of the Observer is 49 meters and the height of light house is 121 m, Calculate the Geographical range of the light
15. What are leading lights ? What purpose do they serve

Section C

All five questions to be answered. (5 x 10 marks = 50 marks)

16. (a) Briefly explain
(i) Vessel engaged in fishing
(ii) Vessel not under command
(b) Differentiate between
(i) Vessel restricted in her ability to manoeuvre, and
(ii) Vessel constrained by her draught
17. (a) Write a short note on Admiralty Chart Catalogue (NP131)
(b) State the information that can be obtained from Routeing Chart
18. (a) When is a vessel deemed to be overtaking ? Briefly explain Rule 13 in your own words
(b) Explain Rule 15 (Crossing situation) in your own words.
19. On 16th December 2015, at 0800 hrs, the following bearings were taken at the same time on compass from a ship.
Galle Lt- $335^{\circ}(C)$, Weligama Lt - $045^{\circ}(C)$, Dondra head Lt $074^{\circ}(C)$. Find position of the ship and the compass error (10 marks)
20. On a southward course at 1900 hrs, Colombo light FL(3) 10s 26m 25M was last seen and Barberyn light FL 20s 46m 27M was first seen at the same time. Prevailing visibility 10M. Height of eye 36m. Find the position of the vessel at 1900 hrs. From this position the vessel steered a course to keep Point De Galle light at distance of 20M on the port side. Find the course steered. No wind or current observed. (10 marks)

