

Indian Maritime University
(A Central University, Govt of India)
End Semester Examinations – December 2022
Programme Name: B Sc (NS)
Semester: III
Subject Code: UG21T5304

Subject Name: Chart Work & Collision Prevention Regulations

Date: 15.12.2022

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

Choose the correct answer. True -False/Fill up the blanks/Match the following:

1. Date of publication along with name of hydrographer to the admiralty is printed at the _____ **(1M)**
2. The Mercator chart projection is a cylindrical projection.
True/False **(1M)**
3. British Weekly Notice to Mariners No. 1 is published at the beginning of every year, and is different from the typical weekly edition. **(1M)**
True/False
4. A power driven vessel underway means _____ **(1M)**
5. WIG craft means
a Multimodal craft b Displacement craft
c Aircraft d None of above **(1M)**
6. Compass error consists of _____ **(1M)**

7. The vessel covers everything used or capable of being used as a means of _____ (1M)

8. IRPCS 1972 as amended, Rule 8b – Action to avoid collision.
“Any alteration of course and/or speed to avoid collision shall, if the circumstances of the case permit, be large enough to be readily apparent to another vessel observing visually or by radar”

- A 5 to 10 deg b 10 to 15 deg
c 15 to 20 deg d 40 to 45 deg (1M)

9. Expand the abbreviation MHLW? (1M)

10. A Rhumb line is a line which when drawn on a Mercator chart makes equal angle to all the meridians on the way.

True/False (1M)

Section B

SHORT ANSWER TYPE QUESTIONS (Five Questions of 02 Marks each.)

11. List the Different types of the chart.
12. Briefly explain what is chart datum.
13. Define Vessel Constrained by her draft.
14. Define Restricted Visibility.
15. If the height of eye of the observer is 45 ft and Height of light house is 145 ft, calculate the Geographical range of the light.

Section C




Answer all the questions. (10 Marks Each)

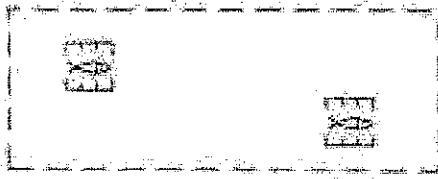
16. a) State the information contained on the Routeing chart. (5 Marks)
b) Explain with neat diagram the difference between Mercator & Gnomonic Projections. (5 Marks)
17. a) Write Short note Admiralty Chart Catalogue (NP131). (6 Marks)
b) Complete the table (4 Marks)

Course (True)	Variation	Course (Magnetic)	Deviation	Course (compass)
135°	7° E		4° W	

038 ⁰		040 ⁰		035 ⁰
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18. (a) Explain Rule 13 (Overtaking) in own Words (5 Marks)
- (b) Explain Rule 15 (Crossing Situation) in own Words (5 Marks)
19. a) At 0800 hrs Sangama Kanda Point bore 320⁰ (T) Distance 16 miles.
Find the vessel's position at 0800 Hrs. (3 Marks)
- b) Thereafter vessel continued her course 198⁰(T) at speed of 15 kts, vessel observed transit bearing of Little Bass Reef Light and Great Bass Reef light bore 228⁰ (T). Calculate time of transit bearing and find out vessel's position. (3 Marks)
- c) Vessel intends to pass Little Besses Reef Lt at distance of 10.5 miles, Calculate the Beam Bearing and ETA to Beam Bearing for Little Besses Lt. (4 Marks)
- 20.a) 1) At 0900 Hrs Point DE Galle Light was seen 4 point on port bow plot approximate position of vessel.
Course 090⁰(T) Speed: 15 kts (2 Marks)
- 2) Vessel intends to pass Dondra Head Lt at distance off 10.6 miles. Calculate at what time Dondra Head Light will be abeam. (3 Marks)
- b) Identify Chart Symbols: (5 Marks)

1. 
2. 
3. 



4.



5.

===== XXXXXX =====

Tolani