

Indian Maritime University
(A Central University, Govt of India)
End Semester Examinations – December 2024

Programme Name: DNS

Semester: II

Subject Code: UD11T5202

Subject Name: ADVANCED BRIDGE EQUIP, WATCH-KEEPING AND METEOROLOGY

Date: 12.12.2024

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 x 10 M)**

1. The most accurate and useful information provided by a Marine radar is
 - a) Bearing
 - b) Range
 - c) Course
 - d) Speed
2. Which of the equipment below works in the VHF frequency?
 - a) GPS
 - b) AIS
 - c) LRIT
 - d) RADAR
3. Which of the following conventions has prescribed the basic principles for a navigation watch?
 - a) SOLAS
 - b) MLC
 - c) STCW
 - d) COLREG
4. Coriolis force is caused due to
 - a) Pressure gradient
 - b) Rotation of earth
 - c) Gravity
 - d) Seasons

5. The day signal cylinder is used by
- A vessel not under command
 - A vessel constrained by her draft
 - A vessel aground
 - A vessel engaged in mine clearance
6. A vessel at anchor which sound signal to give warning of her Position to an approaching vessel?
- One short, one prolonged and One short blast
 - Continuous ringing of the bell
 - One prolonged, two short blasts
 - Four or less short blasts
7. On a Beaufort scale, BF 3 corresponds to.
- Moderate breeze
 - Light breeze
 - Gentle breeze
 - Fresh breeze
8. In a narrow channel or fairway, if a vessel intends to overtake from Starboard- side, following signal(s) to be sounded to indicate the intention to vessel being overtaken.
- One short blast
 - Two short blasts
 - Two prolonged and one short blasts
 - Two prolonged and two short blasts
9. AIS send ship's draft information in Static Data. (True or False)
10. LRIT is an independent system and is not interfaced with AIS. (True or False)

Section B

Five Questions of 02 Marks each

11. Explain Cross track alarm and Anchor watch alarm of GPS?
12. Write short notes on anti Rain Clutter control on Radar.
13. Write short notes on Ship reporting system.
14. Explain Depression and Buy ballots law.
15. What is the technical specifications of ball, cylinder, Diamond and cone of day shapes according to ROR Annex-1?

Section C

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

16. List out ten circumstances when Master should be called to the bridge.
17. Briefly explain the different errors of the GPS.
18. List duties of the following: (4 x 2.5 marks = 10marks)
(i) Master (ii) OOW (iii) Look Out man (iv) Pilot
19. List out the signals that indicate distress and need of assistance as per Annex 4.
20. Describe four ways in which Clouds are formed.
21. Explain the different type of fronts.
22. Describe lights and shapes to be exhibit by ships when (4+3+3 = 10marks)
 - a) Not under Command (NUC)
 - b) Restricted in her ability to Manoeuver (RAM)
 - c) Anchored Vessel