

**INDIAN MARITIME UNIVERSITY**

**Time Bound Assignment September/October 2020**

**DNS Arrear Examinations**

**NAVIGATION – II: BRIDGE EQUIPMENT, WATCHKEEPING & METEOROLOGY  
UD11T4105**

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Date: 25/09/2020

Max Marks: 70

Time: 2 hours

Pass Marks: 35

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Answer any four Questions from Part A and any three Questions from Part B;  
All questions carry equal marks.

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**Section – A: BRIDGE EQUIPMENT AND WATCH KEEPING**

(5 x 2 =10 Marks)

1. a. Name 5 track monitoring equipment on the Bridge with Diagram  
b. State in brief the principle of the echo sounder.

2. Five objective type questions

(5 x 2 = 10 Marks)

a. True or False

- 1) All compasses are fitted with a Lubber Line.
- 2) Voltage variations on a ship have no effect on the Gyro compass.
- 3) Azimuth mirror cannot be used for taking bearings of celestial bodies.
- 4) Gyro & magnetic compasses are compared at least once in a watch.
- 5) The Basic properties of Gyro compasses are gyroscopic inertia & Precession.

b. Write in brief parts of a magnetic compass

(5 x 2=10 Marks)

3. (a) As per rule 2 of colregs, how are navigating officers bound to keep a good watch on the bridge of a ship.  
(b) What are duties of a bridge lookout?

- 4.

(4+6=10 Marks)  
(2x2 marks)

a. Definition –

- 1) Vessel
- 2) Vessel constrained by her draft

b. Describe rule No:7 Risk of collision in your own words

5

(5 x 2 = 10 Marks)

- a. Draw day signal for Vessel restricted in her ability to manoeuvre with obstruction & Navigable side.
- b. Draw day signal for vessel aground

**Part: B - METEOROLOGY**

**Note: Question number six is compulsory.**

**Attend any two questions from below questions.**

6.

- a. Define Troposphere and Stratosphere (5 Marks)
- b. Describe How Atmospheric pressure changes with Height (5 Marks)

7.

- a. Write about Global warming (5 Marks)
- b. Describe briefly DALR and SALR (5 Marks)

8. Describe Barometric Tendency and what indication does it give? (10 Marks)

9. Objective type question of two mark each from following topics attempt any five (MCQ or Fill-in the Blank format) (5\*2 =10 Marks)

- a. Atmospheric Pressure is measured with a .....
- b. Height correction in a barometer is always .....
- c. Evaporation happens at 100° C True or False
- d. Temp inversion happens in Troposphere True or False
- e. Dew point is obtained by an instrument called .....
- f. The Avg Lapse Rate of the Atmosphere is ..... C°/km

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