

INDIAN MARITIME UNIVERSITY
(A Central University, Government of India)
END SEMESTER EXAMINATIONS –DECEMBER 2019
Diploma in Nautical Science (DNS)

Semester-I

Navigation- II: Bridge Equipment, Watchkeeping and Meteorology
UD11T3105

Date: 13.12.2019
Time: 2 Hrs.

Maximum Marks: 70
Pass Marks: 35

Answer **any four** questions from **PART A** and **any three** from **PART B**. All questions carry equal marks.

Part A (Bridge Equipment and Watch Keeping) (Any 4)

1. Draw a labeled sketch of the Layout of a bridge with its Navigational Equipment and list five nav aids in the bridge with their uses.
2. Draw a neat diagram of a wet card magnetic compass and what care and maintenance will you carry out on a magnetic compass.
3. (a) What are the basic duties of an Officer Of the Watch?
(b) What are the duties of a look out?
4. (a) Explain the term "vessel constrained by her draught".
(b) Explain Safe speed. State the factors to be taken into account in determining a safe speed by all vessels.
5. (a) Illustrate the lights and shapes displayed on a vessel more than 100 meters in length at anchor.
(b) Illustrate the lights and shapes displayed on a vessel which is Not Under Command.

Part B Meteorology (Any 3)

6. Explain with a sketch the vertical layers of the Atmosphere.
7. (a) What is Environmental Lapse Rate?
(b) What is Temperature inversion?
8. Briefly explain the hydrological cycle with the help of a diagram.
9. Explain the principle and construction of Aneroid Barometer with a suitable diagram.
