

**Indian Maritime University**  
**(A Central University, Govt of India)**

**Sep/Oct'25 SE**

**Programme Name: DNS**

**Semester: 2**

**Subject Code: UD11T6201**

**Subject Name: MARINE METEOROLOGY**

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Date: 09.09.2025

Max Marks: 70

Duration: 03 Hrs

Pass Marks: 35

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**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. Sometimes, local influences cause the temperature of air to increase with height instead of falling. This is called as -----.

2. What happens when we go up in the atmosphere?

a) Temperature decreases and pressure increases    b) Temperature increases and pressure decreases    c) Both temperature and pressure increases    d) Both temperature and pressure decreases

3. The name given to water drops from clouds, which fall towards the ground, is \_\_\_\_\_.

4. The Coriolis effect is the result of....

a) Pressure gradient    b) Earth's axis of inclination    c) Earth's rotation    d) Earth's revolution

5. When a current from equatorial regions passes through higher latitudes, it will be a \_\_\_\_\_ current.

6. The ----- is an instrument for obtaining the relative humidity of air.

- a) Hygrometer      b) Hydrometer      c) Decimetre      d) Barometer

7. How does seawater density vary with depth?

- a) Seawater density increases with depth      b) Seawater density remains the same irrespective of the depth      c) Seawater density decreases with depth      d) Change in seawater density at any place varies with the time of the day

8. ----- instrument is used to measure Atmospheric pressure?

9. What is it called when a sample of air reaches saturation point of temperature?

- a) Dew point  
b) Evaporation point  
c) The atmosphere  
d) Absolute humidity

10. A \_\_\_\_\_ Facsimile chart is the predicted situation at a specified future time, based on present indications.

- a) Analysis      b) Prognosis

### **Section B**

#### **Five Questions of 02 Marks each**

11) What is a col or a void between a convergence of pressure systems?

12) Explain Buys-Ballot's Law.

13) Define "Arctic sea smoke".

14) Explain the formation of advection fog, mentioning areas, seasons and reasons for dispersal?

15) Describe "Routeing of Ships" and its advantage for safe and efficient vessel navigation.

### Section C

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

16. Define 'anticyclone'? Draw a synoptic pattern of an anticyclone, for both northern and southern hemispheres, showing isobars and wind circulation, what weather associated with Anti cyclones? (10 marks)
17. List and describe the ten basic cloud types? (10 marks)
18. Explain the formation of 'radiation fog' and 'advection fog'. (10 marks)
19. Describe the causes of ocean currents. (10 marks)
20. Define:
- (a) Specific humidity
  - (b) Absolute humidity
  - (c) Relative humidity
  - (d) Dew point temperature
  - (e) Frost point
- (5x2=10 marks)
21. Briefly explain different types of ice, icebergs, limits of icebergs, accumulation of ice on ships and organizations for issuing ice warnings.? (10 marks)
22. Describe Ideal conditions for the formation of TRS. Explain with a diagram, the actions to be taken for the avoidance of storm centres. (10 marks)

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