

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

**Mar/Apr'26 SE**

**Programme Name: B Sc (NS)**

**Semester: III**

**Subject Code: UG21T6301**

**Subject Name: Marine Meteorology**

Date: 02.03.2026

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 the respective section
- (iii) Ship's weather code 1982 is permitted

**Section A**

**Choose the correct answer as applicable (10 x 1 mark = 10 marks)**

1. Which instrument is used to measure atmospheric pressure?

- (a) Hygrometer
- (b) Anemometer
- (c) Barometer
- (d) Psychrometer

2. An \_\_\_\_\_ (Ocean current/Tidal stream) is the general movement of a body of sea water on a permanent, semi-permanent or seasonal basis.

3. Tropical Revolving Storms (TRS) originate in latitudes between.....(50° and 65°/ 5° and 20°)

4. Icebergs of glacial origin have (regular/irregular) shapes and hence are not good radar targets.

5. If the pressure indicated by the Aneroid Barometer on the bridge is 996.5 mb and the Bridge is 15 m above sea level, then what is the atmospheric pressure at that place :

- (a) 999.5 mb
- (b) 998 mb
- (c) 1000.5 mb
- (d) 995 mb

6. What is the westernmost longitude reached by the TRS centre at the time of recurring called as :
- (a) Vortex
  - (b) Vertex or Cod
  - (c) Crest
  - (d) Trough
7. How is the tidal range on the days of Spring tide
- (a) Tidal range is maximum
  - (b) Tidal range is minimum
  - (c) Tidal range is exactly at the mean average for the month
  - (d) Neither Spring nor Neap tides influence the tidal range
8. Which among the following effect ocean tides:
- (a) Earth and Moon
  - (b) Moon and Star
  - (c) Sun and Moon
  - (d) Earth and Sun
9. Hydrometer is used to measure Dew point (True/False)
10. What among the following are the objectives :
- (a) To facilitate the exchange of weather information across national borders.
  - (b) To provide the framework for international cooperation at a global scale on meteorological issues
  - (c) To be the United Nation Organisation's authoritative voice on the state and behaviour of the Earth's atmosphere.
  - (d) All of the above

### Section B

**Answer all five Questions (5 x 2 = 10 marks)**

- 11. Differentiate between True and Apparent wind. Briefly explain with an example.
- 12. Explain the significance of dew point in predicting weather conditions at sea.
- 13. Briefly explain why cloudy nights are warmer than clear nights
- 14. Why are surface currents important for climate
- 15. With reference to a Tropical Revolving Storm (TRS) define the terms Track, and Path

### Section C

**Answer any five out of the Seven Questions (5 x 10 marks = 50 marks).**

- 16. (a) Briefly explain Buys-Ballot's law (5 marks)
- (b) With the help of suitable sketches, describe the formation of Land and Sea breezes. (5 marks)

17. (a) Differentiate between absolute humidity and relative humidity (5 marks)  
(b) Explain the formation of radiation fog and advection fog (5 marks)
18. (a) What are ocean currents and how are they different from tidal streams (5 marks)  
(b) List out any 5 different ocean currents and name the regions where they are prevalent (5 marks)
19. (a) Briefly explain the warning signs of a Tropical Revolving Storm (TRS) (5 marks)  
(b) Differentiate between Tropical revolving Storm (TRS) and Temperate Latitude Depression (TLD) (5 marks)
20. (a) Describe the various sources of weather information available to ships at sea. (5 marks)  
(b) List the various weather information available on a synoptic chart (5 marks)
21. (a) Explain the procedure of finding Relative humidity and Dew Point (5 marks)  
(b) Explain with suitable diagrams Spring and Neap tides (5 marks)
22. Describe both the monsoon regimes of the Indian sub-continent (10 marks)