

Indian Maritime University
(A Central University, Govt of India)
End Semester Examinations – December 2022
Programme Name: B Sc (NS)
Semester: 4
Subject Code: UG21T4406
Subject Name: METEOROLOGY

Date: 02.12.2022

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.
- (iii) Scientific Calculator is permitted.
- (iv) Graph sheets may be provided by the college

Section A

Ten MCQs/Fill in the Blanks of 01 Mark each –

1. _____ Breeze usually blows during day time
2. In a Warm Front temperature of air changes from _____ to _____
3. An equipment used to receive weather information in telex format is _____
4. A ship which collects weather information voluntarily is called _____
5. A TRS is usually formed in Latitudes _____
6. _____ current is found in west coast Africa
7. _____ is formed due to wind blowing at a distant area
8. As sea water temperature decreases density _____
9. A portable instrument used to measure Relative humidity is called _____
10. Hydrometer is used to measure dew point- True/False

Section B

Five Questions of 02 Marks each. SHORT ANSWER TYPE QUESTIONS

11. Describe Land Breeze and Intertropical Convergence Zones
12. Describe Col & warm Front
13. Sketch an isobar indicating High Pressure area on a weather chart
14. Describe the Warning signs of an approaching TRS

15. Explain any two Effect of Ocean currents on the climate

Section C

Answer five out of seven questions. (10
Marks Each)

16. Sketch Wind and Pressure systems over the oceans

17. (a) Describe the SW monsoon over the Arabian sea (5)

(b) Describe the Classification and properties of air masses (5)

18. Code the following ships report

Ship IMUK Position 19.9296° N, 76.2873° E course made good past three hours 170deg at 20knots GMT 16d00h20m

Wind 052deg estimated at 10knots.

Visibility 500metres, pressure 1009.9mb, tendency +3.6mb, Barograph trace
Temperature Dry 28.35degC, Wet 23.0degC, sea 20.6degC

Clouds sky overcast with a few blue patches .Low clouds 4oktas, base
600metres above sea, Cu of strong vertical extent. Ac in a chaotic sky Cc

Present weather :Visibility poor due to dust in suspension in the air, not
raised by wind at or near ship

Past weather :Thick haze, thunderstorm

Sea: Period 04seconds, height 0.4metres

Swell: From 270deg, period 08seconds, height 04m

19. (a) Describe Different types of ice encountered at sea

(b) Describe the Action to be taken when the presence of TRS is confirmed

20. (a) Describe the Causes of ocean currents

(b) Explain sea waves, swell, storm surge, tsunami, bore tides;

21. (a) Describe the Properties of ocean water and their relationship

(b) Explain how weather information is collected and disseminated to ships

22. Describe the Principle, construction, use and operation of Aneroid Barometer