

INDIAN MARITIME UNIVERSITY
(A Central University, Government of India)
End Semester Examination Dec 2019/Jan 2020
B.Sc. (Nautical Science)
Semester -III
UG21T3304 - Meteorology Paper- I

Date: 16.12.2019

Max Marks: 70

Time: 3 Hours

Pass Marks: 35

Note: Question No. 1 is compulsory.

Answer any 6 questions from remaining 8 questions (each of 10 marks).

Scientific Calculator is permitted if required.

- Q1. Define the following: (2 x 5 = 10 marks)
- (a) Pressure Gradient
 - (b) Coriolis force
 - (c) Dew point temperature
 - (d) Storm surge
 - (e) Environmental Lapse Rate
- Q2. (a) Write short notes on
- i. Solar Radiation
 - ii. Terrestrial Radiation
 - iii. Greenhouse effect. (5 marks)
- (b) Explain Height correction to atmospheric pressure, Isobar, Barometric tendency. (5 marks)
- Q3. (a) List the factors affecting the atmospheric motion, resulting winds. (5 marks)
- (b) Write short notes on:
- i. Cirrus cloud
 - ii. Cumulus cloud
 - iii. Stratus cloud
 - iv. Cumulonimbus cloud
 - v. Nimbostratus cloud. (5 marks)
- Q4. (a) Write short notes on Radiation fog and Advection fog. (5 marks)
- (b) What is Hygrometer? What are the precautions to be taken when using Hygrometer? (5 marks)
- Q5. (a) What are the causes of Ocean currents? Briefly explain them. (5 marks)
- (b) Differentiate between Sea waves and Swell. (5 marks)
- Q6. (a) What are the properties of Ocean water? Briefly explain the factors influencing the salinity of Ocean. (5 marks)
- (b) Explain Beaufort scale of wind force. (5 marks)
- Q7. Ship on course 045° (T), speed 15 knots apparent wind 100° at 20 knots find the direction and speed of true wind. (10 marks)
- Q8. Explain the relationship between atmospheric pressure and height above sea level. Also write short notes on the diurnal variation of pressure. (10 marks)
- Q9. Explain the principle, construction, use and operation of Whirling Psychrometer. Also state the advantages. (10 marks)