

**INDIAN MARITIME UNIVERSITY**  
(A Central University, Government of India)  
**End Semester Examination Dec 2019/Jan 2020**  
**B.Sc. (Nautical Science)**  
**Semester -III**  
**UG21T2311- Meteorology-Paper I**

**Date: 18.12.2019**

**Max Marks: 70**

**Time: 3 Hours**

**Pass Marks: 35**

**NOTE: Attempt any SEVEN questions. All questions carry equal marks**  
**Use of non-programmable scientific calculator is allowed**

- Q1. Explain with simple diagram the composition, physical properties and vertical layers of Earth's atmosphere. (4+4+2 marks)
- Q2. A ship is on course 045° speed 15 knots apparent wind 100° at 20 knots. Find the direction and speed of true wind. (5+5 Marks)
- Q3. Write short notes on following: (5+5 Marks)  
(a) Solar & Terrestrial Radiations  
(b) Green House Effect
- Q4. Explain the following in brief: (5x2=10 marks)  
a) Pressure Gradient  
b) Coriolis force  
c) Barometric tendency  
d) Isobar  
e) Isallobar
- Q5. Write short notes on the following clouds: (5x2=10 marks)  
a) Cirrus  
b) Cumulus  
c) Stratus  
d) Cumulonimbus  
e) Nimbostratus
- Q6. Describe Radiation fog and Advection fog. (10 marks)
- Q7. Define: (5x2=10 marks)  
(a) Specific humidity  
(b) Absolute humidity  
(c) Relative humidity  
(d) Dew point temperature  
(e) Frost point
- Q8. Write short notes on: (5x2=10 marks)  
a) Drizzle  
b) Snow  
c) Dew  
d) Mist  
e) Sleet
- Q9. Describe following: (5+5 Marks)  
a) Conduction, convection and radiation.  
b) Evaporation, condensation and precipitation