

Five Year Integrated M.Sc. Examinations 2023

Sem-V

Course: EES-3-5-1 (2016)
(Climatology and Climate Change)

Time: 4 hours

Full Marks: 80

Questions are of value as indicated in the margin.
Answer **Question No.1** and **any four** from the rest.

1. Write short notes on **any four** of the following.
 - (a) Climate system
 - (b) Scale of meteorology
 - (c) Dew point temperature
 - (d) Southern Oscillation Index
 - (e) Wind rose
 - (f) Heat Island Effect

4 x 4 = 16
2.
 - (a) Write a note on the classification of clouds into families and genera.
 - (b) Describe the factors that control the direction and speed of wind.

8 + 8
3.
 - (a) Discuss the patterns of circulation in ocean and their influence on climate.
 - (b) What is 'Geostrophic Wind'?

12 + 4 = 16
4.
 - (a) Write the major characteristics of the Indian Summer Monsoon.
 - (b) Describe briefly the life cycle of a tropical cyclone.

8 + 8 = 16
5.
 - (a) What is lapse rate? Mention the types of lapse rate.
 - (b) Discuss different stability class one can find in the atmosphere based on lapse rate.

(2 + 6) + 8 = 16
6.
 - (a) What are meant by plume and plume rise?
 - (b) Discuss the factors which control the plume rise and how different meteorological parameters affect dispersal of plume.

(2+4) + (4+6) = 16
7.
 - (a) Explain the Greenhouse effect and its role in climate change.
 - (b) Discuss the major international treaties and protocols on climate change.

8 + 8 = 16