U.G. 5th Semester Examination-2025

PHYSICS

[HONOURS]

Discipline Specific Elective (DSE)

Course Code : PHS-H-DSE-T-02

(Atmospheric Physics)

[CBCS]

Full Marks : 40 Time : $2\frac{1}{2}$ Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer any **five** questions : 2×5=10

a) What is Hadley scale?

b) What is Lamb Wave?

c) What is atmospheric boundary layer?

d) What do you mean cyclones and anticyclones?

e) What is Rossby No.?

f) How do atmosphere maintain Earth's average surface temperature?

g) What do you mean by aerosols?

h) What is the difference between geostropic and gradient flow?

2. Answer any **two** questions: 5×2=10

a) Discuss Rayleigh scattering and Mie scattering.

b) Explain different types of clouds.

c) Describe different large-scale mid-latitudinal and tropical waves.

d) How RADAR forecasts cyclonic storm?

3. Answer any **two** questions: 10×2=20

a) What is Radiosonde measurement? Describe the process of vertical atmospheric profiling using a Radiosonde instrument.

b) Discuss spectral distribution of solar radiation. Define absorption and scattering of solar radiation.

c) Explain different types of clouds with their identifying features.

d) What is atmospheric wave? Describe different atmospheric waves.