Reg. No.															

M.Sc. DEGREE EXAMINATION, MAY 2022

Fourth Semester

18PPH4EC – ATMOSPHERIC PHYSICS

(For the candidates admitted during the academic year 2018-2019 onwards)

Time: Three hours Max. Marks: 100

PART – A (5 × 5 = 25 Marks)

Answer **ANY FIVE** Questions

1. Write the equation of the state in general form and write the same of ideal gas, mixture of gases and real gases.
2. Write about radiative equilibrium of the planet earth.
3. Define Latent and sensible heat fluxes and write their expressions.
4. Write a brief note of thermodynamic diagrams.
5. What are different types of clouds and write the expression for terminal velocity?
6. Write about geostrophic and gradient winds.
7. Write about cloud development and stability.
8. Write about Intertropical Convergence Zone (ITCZ).

PART – B (5 × 15 = 75 Marks)

9. a. What are the components of earth atmosphere and write it thermal structure with a neat diagram?

(OR)

b. Write any two radiation laws and describe the earth energy budget.

10. a. Define absolute, specific and relative humidicties and derive the relation between water vapor mixing ratio and specific humidity.

(OR)

b. Illustrate the stability of atmosphere.

11. a. Explain the theory of growth mechanism of a cloud droplet.

(OR)

b. Illustrate atmosphere trace gases and their role in atmospheric chemistry.

12. a. Write about fundamental forces in meteorology.

(OR)

b. Explain the diurnal characteristics of atmospheric boundary layer.

13. a. Explain the tropical cyclones and western disturbances.

(OR)

b. Write in detail about science of climate change.

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