

M.Sc. 1st Semester Examination, 2024

GEOGRAPHY

(Climate Science)

PAPER—GEO-105

Full Marks : 25

Time : 1 hour

Answer all questions

The figures in the right hand margin indicate marks

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

GROUP — A

Answer any two questions : 2×2

1. What is potential temperature ?
2. What is hydrostatic equilibrium ?

3. What is dew point temperature ?
4. What is specific humidity ?

GROUP – B

Answer any **two** questions : 4×2

5. State the difference between isothermal and adiabatic processes.
6. Briefly describe the process of raindrop development in supersaturated air.
7. Write a note on the IOD.
8. Why geopotential height is an important parameter in the meteorological study ?

GROUP – C

Answer any **one** question : 8×1

9. How do you derive the temperature-volume

(T-V) and pressure-temperature (P-T) relationships from the initial pressure-volume ($pv^\gamma=k$) relationship in an adiabatic process ?

10. Describe the elevated heat pump theory in the Indian Summer Monsoon.

[Internal Assessment – 5 Marks]
