

B.Sc. 2nd Year 1st Semester Examination, 2023

Geography

Course Code: SC/GEOG/UG/CORE/TH/05

Paper: Climatology (C305T)

Time: Two hours

Full Marks: 50

GROUP A

Answer any two questions

10x2= 20

1. Give an account of the forces responsible for atmospheric motion. Explain the mechanism of geostrophic wind. 6+4
2. What is temperature gradient? Explain the different types of surface inversions of temperature. What are aerosols? 2+6+2
3. How does Bergeron-Findeisen process explain the formation of rain from 'cold' clouds? State the condition for absolute instability in the atmosphere. 8+2
4. Describe the role of Jet Streams in the onset of the Indian Monsoon. How do air masses get their characteristics? 7+3

GROUP B

Answer any two questions

5x2=10

5. Differentiate among normal, environmental and adiabatic lapse rates.
6. State the conditions necessary for the formation of a tropical cyclone.
7. What unique atmospheric conditions are responsible for ozone loss above Antarctica?
8. Give an account of the Earth-Atmosphere energy balance.

GROUP C

Answer any five questions

2x5=10

9. Differentiate between barotropic and baroclinic atmosphere.
10. What are noctilucent clouds?
11. When does occlusion occur?
12. Define hydrostatic equilibrium.
13. What is the effect of Rayleigh scattering?
14. State Buys Ballot's Law.
15. What do you mean by frontolysis?
16. Define latent heat.

Internal Assessment

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