

BACHELOR OF SCIENCE EXAMINATION, 2017

(2nd Year, 3rd Semester)

GEOGRAPHY (HONOURS)

Paper - 302 T

Climatology

Time : Two hours

Full Marks : 50

Use a separate Answer-script for each group.

GROUP - A (20 marks)

Answer any *two* questions.

1. Explain with suitable diagrams the theory regarding formation of precipitation in temperate regions. What is 'cloud seeding' ? 8+2
2. Discuss the evolution of a tropical cyclone with special reference to the different stages of its life cycle. Classify tropical cyclones according to the Saffir-Simpson Scale. 7+3
3. What is greenhouse effect? Discuss its causes and effects on the global environment. 2+4+4

(Turn Over)

(2)

4. Discuss monsoon mechanism with reference to Indian subcontinent. Explain the role of jet streams in Indian monsoons? 6+4

GROUP - B (10 marks)

Answer any **two** questions.

5. Explain the heat budget of the atmosphere with a suitable diagram. 5
6. What are the controlling factors of insolation? 5
7. Differentiate between barotropic and baroclinic atmosphere. 5
8. Explain the different processes of inversion of temperature adjacent to the earth surface. 5

GROUP - C (20 marks)

Answer any **ten** questions. 2x10

9. What is Isonomalous Temperature?
10. State the importance of 'Van Allen Radiation Belt' in the atmosphere.

(3)

11. Differentiate between advection fog and radiation fog.
12. What is albedo?
13. Why do pilots prefer to fly through stratosphere?
14. Differentiate between dry and wet adiabatic lapse rates of the atmosphere.
15. What is Solar constant?
16. What do you understand by 'Heat Island'?
17. What is an Occlusion?
18. Differentiate between geographical equator and thermal equator.
19. What do you mean by atmospheric instability?
20. What is Walker Circulation?
21. Define dew point temperature.
22. Mention the major air masses of the earth.
23. Define saturation vapour pressure.

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