

Ex/Geog/I/302/32/2019(OLD)

Inter B.sc 1<sup>st</sup> Semester Examination 2019 (OLD)

Geography (Honours)

Climatology

Paper 302

Time: Two Hours

Full Marks: 50

**GROUP-A**

*Answer any two questions*

*10x2=20*

1. Explain the nature, layering, and vertical temperature distribution of the atmosphere (3+4+3)
2. Describe the different types of temperature inversion occurring in the atmosphere. What is Isonomalous temperature? (8+2)
3. Mention the major controlling factors of wind motion. Discuss the general pattern of global atmospheric circulation with special reference to meridional and zonal wind movements (3+7)
4. Explain the life cycle of a temperate cyclone with special reference to jet stream movements. Define vorticity (8+2)

**GROUP-B**

*Answer any two questions*

*5x2=10*

5. Make a brief classification of the major air masses of the atmosphere
6. Mention the conditions favourable for creation of conditional instability in the atmosphere
7. Write a short note on the scheme of climatic classification of Köppen
8. Briefly explain the 'upper air perturbation theory' on genesis of monsoon

**GROUP-C**

*Answer any ten questions*

*2x10=20*

9. Mention the importance of the polar stratospheric cloud
10. Delineate heterosphere
11. Mention the Stephan-Boltzaman law of radiation
12. Why does the sky look red during sunset?
13. Define 'atmospheric window'
14. Provide a precise definition of 'greenhouse effect'
15. What is Rayleigh scattering?
16. Mention the classes of Safir-Simpson scale
17. What is an axis of monsoon?
18. What are tropical westerlies?
19. Why is the magnitude of Coriolis force highest at the poles?
20. What is a stationary front?
21. Define an ice crystal nucleus
22. What is a storm surge?
23. What is a 'SO-Index'?