

2021

**GEOGRAPHY**

[HONOURS]

Paper : IV

Full Marks : 75

Time : 4 Hours

*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****(Climatology)****[Marks : 35]**

1. Answer any **three** from the following:  $1 \times 3 = 3$
- What is *ITCZ*?
  - What is *Chinook*?
  - Define saturated air.
  - What is adiabatic lapse rate?
  - What is meant by pressure gradient?
2. Answer any **five** from the following:  $2 \times 5 = 10$
- What is rain gauge?
  - What is meant by occlusion?

- Mention two characteristics of *Equatorial low*.
- What is *roaring forties*?
- What do you understand by horse latitude?
- Differentiate the *anabatic from katabatic* winds.
- What do you understand by *Hadley cell*?
- Define inversion of temperature.

3. Answer any **two** from the following:  $6 \times 2 = 12$
- Highlight the salient characteristics of jet streams.
  - Evaluate the Ice Crystal theory of precipitation.
  - Trace out the Koppen's climatic classification mentioning their bases.
4. Answer any **one** from the following:  $10 \times 1 = 10$
- Elucidate the major theories of origin of monsoon.
  - Explain the thermodynamic modification and classification of air masses mentioning bases.

**GROUP-B**

**(Hydrology)**

**[Marks : 20]**

5. Answer any **two** from the following:  $1 \times 2 = 2$
- a) What is aquiclude?
  - b) What is surface flow?
  - c) What is *vados*?
  - d) What do you understand by evapotranspiration?
6. Answer any **one** from the following:  $2 \times 1 = 2$
- a) What is an artesian well?
  - b) Define seepage.
  - c) Name the salient components of a unit hydrograph.
7. Answer any **one** from the following:  $6 \times 1 = 6$
- a) Highlight the facts and facets of present day groundwater recharge crisis.
  - b) Explain the major factors influencing evaporation.
8. Answer any **one** from the following:  $10 \times 1 = 10$
- a) Make an appraisal on process of infiltration mentioning its major controlling factors.
  - b) Elucidate the major themes and fields of Hydrology.

**GROUP-C**

**(Oceanography)**

**[Marks : 20]**

9. Answer any **two** from the following:  $1 \times 2 = 2$
- a) What do you understand by continental rise?
  - b) What is ooze?
  - c) What is *iceberg*?
  - d) Define isohaline.
10. Answer any **one** from the following:  $2 \times 1 = 2$
- a) What do you mean by atoll?
  - b) What is seamount?
  - c) What is OTEG?
11. Answer any **one** from the following:  $6 \times 1 = 6$
- a) Briefly discuss the major currents of Indian Ocean with suitable illustration.
  - b) Account for the temperature variation of ocean water.
12. Answer any **one** from the following:  $10 \times 1 = 10$
- a) Outline and discuss the classification of ocean deposits highlighting their bases.
  - b) Describe the scope and content of Oceanography.