

2020

GEOGRAPHY

[HONOURS]

Paper : IV

[NEW SYLLABUS]

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 adiabatic lapse rate?
 - What is meant by pressure gradient?
 - What is *ITCZ*?
 - What is *Chinook*?
 - Define saturated air.
2. Answer any **five** from the following: $2 \times 5 = 10$
- What do you understand by horse latitude?
 - Differentiate the *anabatic* from *katabatic* winds.

[Turn over]

- What do you understand by *Hadley cell*?
- Define inversion of temperature.
- What is rain gauge?
- What is meant by occlusion?
- Mention two characteristics of *Equatorial low*.
- What is *roaring forties*?

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

GROUP-B
(Hydrology)
[Marks : 20]

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

GROUP-C
(Oceanography)
[Marks : 20]

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