

**2021****ENVIRONMENTAL SCIENCE****[HONOURS]****Paper : II**

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.*

1. Answer any **five** of the following:  $1 \times 5 = 5$
- What is albedo?
  - What is atmospheric window?
  - Define land use.
  - Define Vadose Zone.
  - What is relative humidity?
  - What is lithosphere?
  - What is cyclone?
2. Answer any **six** of the following:  $2 \times 6 = 12$
- What are the different heat transfer processes?
  - What is the difference between ridge and trough?

- What is sensible heat?
  - Mention the role of Tibetan plateau in climate.
  - Distinguish between deposition and erosion.
  - What are the units of wind speed and direction?
  - What are the consequences of earthquake?
  - Mention biotic and abiotic environmental components.
  - Distinguish between First and Second law of thermodynamics.
  - Compare natural and artificial radio isotopes.
3. Answer any **three** of the following:  $6 \times 3 = 18$
- Define temperature inversion. Discuss its role in the atmosphere.
  - Mention the role of acoustic radar in environmental analysis.
  - Distinguish between natural and artificial recharge of groundwater.
  - Mention the role of rainwater harvesting as a mitigational measure of drought.

*[Turn over]*

- e) Enumerate and discuss different types of drought.
4. Answer any **four** of the following:  $10 \times 4 = 40$
- a) Explain Darcy's law of hydraulic conductivity in a porous media. Mention the limitation of Darcy's law.
- b) Mention different physical techniques adopted for environmental analysis.
- c) Explain the consequences of landslide hazard. Write down various measures in order to mitigate this hazard.
- d) Describe the working principle of LASER with block diagram.
- e) Narrate different agroclimatic zones of West Bengal.
- f) Illustrate with examples different processes of weathering.
-