

**2020**  
**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:  $1 \times 5 = 5$
- a) What is relative humidity?
  - b) What is lithosphere?
  - c) What is cyclone?
  - d) What is albedo?
  - e) What is atmospheric window?
  - f) Define land use.
  - g) Define Vadose Zone.
2. Answer any **six** of the following:  $2 \times 6 = 12$
- a) What are the units of wind speed and direction?
  - b) What are the consequences of earthquake?

- c) Mention biotic and abiotic environmental components.
  - d) Distinguish between First and Second law of thermodynamics.
  - e) Compare natural and artificial radio isotopes.
  - f) What are the different heat transfer processes?
  - g) What is the difference between ridge and trough?
  - h) What is sensible heat?
  - i) Mention the role of Tibetan plateau in climate.
  - j) Distinguish between deposition and erosion.
3. Answer any **three** of the following:  $6 \times 3 = 18$
- a) Mention the role of rainwater harvesting as a mitigational measure of drought.
  - b) Enumerate and discuss different types of drought.
  - c) Define temperature inversion. Discuss its role in the atmosphere.
  - d) Mention the role of acoustic radar in environmental analysis.

e) Distinguish between natural and artificial recharge of groundwater.

4. Answer any **four** of the following:  $10 \times 4 = 40$

a) Describe the working principle of LASER with block diagram.

b) Narrate different agroclimatic zones of West Bengal.

c) Illustrate with examples different processes of weathering.

d) Explain Darcy's law of hydraulic conductivity in a porous media. Mention the limitation of Darcy's law.

e) Mention different physical techniques adopted for environmental analysis.

f) Explain the consequences of landslide hazard. Write down various measures in order to mitigate this hazard.

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