

**2020****ENVIRONMENTAL SCIENCE****[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.*

1. Answer any **five** of the following:  $1 \times 5 = 5$
- State the pH range of acid rain.
  - What is the full form of UNFCCC?
  - Mention two substitutes of CFC.
  - Cite two examples of vector borne diseases.
  - Define eutrophication.
  - In which year Montreal Protocol was signed?
  - Mention the most common coliform bacteria present in water contaminated with faecal matter.

2. Answer any **six** of the following:  $2 \times 6 = 12$
- Mention the symptoms of fluorosis.
  - Explain biomagnification with an example.
  - Distinguish between  $LC_{50}$  and  $LD_{50}$ .
  - What is meant by ENSO?
  - Mention two effects of human exposure to UV radiation.
  - Explain 'soil quality'.
  - What gas, action and country make the largest contribution to global warming?
  - Define xenobiotic substance. Give two examples.
  - Cite an example of one Ozone-Depleting Substance (ODS) and one ODS substitute.
3. Write short notes on any **three** of the following:  $6 \times 3 = 18$
- Soil pollution monitoring and control strategies
  - El Nino effects
  - Toxicity bioassays
  - Bioaccumulation and Biomagnification.
  - Cooperation and Altruism among animals.

*[Turn over]*

4. Answer any **four** of the following:  $10 \times 4 = 40$
- a) Define eutrophication. Describe its causes and consequences on lake ecosystem. Mention some control and restoration strategies to reverse eutrophication.  $2+5+3=10$
  - b) Explain the cause(s) of arsenic pollution in groundwater in selected districts of West Bengal. Describe the toxic effects of arsenic poisoning and its preventive and/or remedial measures.  $3+4+3=10$
  - c) Discuss about the adverse effects of air pollution on human health. Give a short account on the control devices installed in industries for controlling different pollutants.  $6+4=10$
  - d) Write an essay on major occupational health hazards in coal mines.  $10$
  - e) Is fluoride pollution geogenic in nature? Justify your answer. Describe the toxic effects of fluoride and its preventive and/or remedial measures.  $2+5+3=10$
  - f) Define stress. Describe various impacts of salt-stress on plants' physical process. Explain plants' adaptive features linking with their physiological significance for coping salt-stress.  $2+4+4=10$