

2021
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: $1 \times 5 = 5$
- 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.
 - State the pH range of acid rain.
 - What is the full form of UNFCCC?
 - Mention two substitutes of CFC.

2. Answer any **six** of the following: $2 \times 6 = 12$
- 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.
 - Mention the symptoms of fluorosis.
 - Explain biomagnification with an example.
 - Distinguish between LC_{50} and LD_{50} .
 - What is meant by ENSO?
3. Write short notes on any **three** of the following: $6 \times 3 = 18$
- Toxicity bioassays
 - Bioaccumulation and Biomagnification.
 - Cooperation and Altruism among animals.
 - Soil pollution monitoring and control strategies
 - El Nino effects

4. Answer any **four** of the following: $10 \times 4 = 40$
- a) Write an essay on major occupational health hazards in coal mines. 10
 - b) Is fluoride pollution geogenic in nature? Justify your answer. Describe the toxic effects of fluoride and its preventive and/or remedial measures. $2+5+3=10$
 - c) 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. $2+4+4=10$
 - d) Define eutrophication. Describe its causes and consequences on lake ecosystem. Mention some control and restoration strategies to reverse eutrophication. $2+5+3=10$
 - e) 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. $3+4+3=10$
 - f) 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. $6+4=10$