

POST-GRADUATE DEGREE PROGRAMME
Term End Examination — December, 2024
ENVIRONMENTAL SCIENCE (PGES)
Paper : ENVS CC201 : ENVIRONMENTAL POLLUTION,
DEGRADATION AND CONTROL
(Under CBCS from January 2024 Enrolment Session)

Time : 2 hours

Full Marks : 50

Weightage of Marks : 80%

Special credit will be given for accuracy and relevance in the answer. Marks will be deducted for incorrect spelling, untidy work and illegible handwriting. The weightage for each question has been indicated in the margin.

1. Answer any *five* of the following : 2 × 5 = 10
 - a) Define contaminants and pollutants.
 - b) What are the natural pollutants of air ?
 - c) What are the secondary air pollutants ?
 - d) What are the two categories of contaminants based on chemical nature ?
 - e) State two important sources of coastal water pollution.
 - f) Define aerosol.
 - g) Mention two important effects of industrial pollutants.
 - h) What is the importance of stratosphere ?

2. Answer any *four* of the following : 5 × 4 = 20
 - a) What are the major sources of water pollution ? Explain the effects of pollutants on aquatic ecosystem with suitable example. 2 + 3
 - b) Write a note on the role of SO₂ in environmental pollution.
 - c) Comment on the role of chlorofluorocarbons in polluting the atmosphere.
 - d) What are the primary air pollutants ? Write a note on their formation in atmosphere. 2 + 3
 - e) How is ozone formed in atmosphere ?

- f) Enumerate the damages caused by radiations.
- g) Explain Gaussian Plume model with formula.
- h) What is air pollution tolerance index ? How is this index calculated ?

2 + 3

3. Answer any *two* of the following : 10 × 2 = 20

- a) Define acid rain. State the chemical reactions involved in the formation of acid rain. Discuss the effects of acid rain on aquatic and terrestrial environments. 2 + 3 + 5
- b) Which are the five major greenhouse gases ? Discuss in details the sources and role of these gases in environmental pollution. 2 + 8
- c) What are the sources of marine pollution ? How ocean currents affect in spreading the pollutants ? Write a note on the remedies of marine pollution. 2 + 3 + 5
- d) Which are the fundamental radiation types ? What are the sources of radioactive pollution ? Write a note on man's exposure to these radiations. 2 + 4 + 4

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