

Sl. No. : 7990

Unique Paper Code: 2183012011

Name of the Course: Environmental Indicators

Name of the Programme: B.Sc. Environmental Sciences

(Discipline Specific Elective – 11)

Semester – VIII

Duration: 2 Hours

Maximum Marks: 60

Instructions for Candidates

Write your Roll No. on the top immediately upon receipt of this question paper. Answer any **four** questions. All questions carry equal marks.

1. (a) Define and explain the concept of environmental indicator, environmental monitoring, and sustainability indicator. **(10)**
(b) Explain the relevance of environmental indicators in sustainability assessment and public communication. **(5)**
2. Differentiate between the following: **(5×3=15)**
(a) Air quality standards and air quality guidelines
(b) Surface water indicators and groundwater indicators
(c) Species richness and species diversity
3. Write short notes on the following: **(3¼×4=15)**
(a) Principles of environmental indicator selection
(b) Environmental indicator reporting
(c) Criteria air pollutants
(d) Indoor air quality and health
4. (a) Explain major air pollution sources and emissions. **(7)**
(b) Discuss the health effects of particulate matter, ozone, nitrogen oxides, sulfur dioxide, carbon monoxide, volatile organic compounds and lead. **(8)**
5. (a) Explain water pollution sources and pathways. **(7)**
(b) Discuss dissolved oxygen, pH, temperature, turbidity, nutrients, chlorophyll-a, BOD, fecal coliform bacteria and total dissolved solids as water quality indicators. **(8)**
6. Discuss climate change indicators with reference to greenhouse gas emissions, carbon dioxide concentration, global temperature, sea-level rise, ocean acidification, extreme weather events, glaciers, ecosystem productivity, species phenology and human health. **(15)**