



**Indira Gandhi National Tribal University,
Amarkantak (M.P.)**

Semester End Examination, April - 2023

Environmental Science

M.Sc. – I Semester

Paper Name- Environmental Chemistry

Paper Code- EST:104

Max Time: 3 Hrs.

Max Marks: 60

**Note: Attempt questions of all two sections as directed.
Distribution of marks is given with sections.**

(5x12=60)

Q.1 Attempt any three questions. Each question carries 4 marks.

(3 x 4=12)

- (a) What is photochemical smog? Give examples
- (b) What is bio-monitor and bio-indicator? Give examples?
- (c) Explain briefly Oxygen cycle and its importance ?
- (d) What are the differences between gaseous and sedimentary cycle?

Q.2. Write short notes on any three

(3 x 4 =12)

- a) Role of C, N, P, Mg, S, Ca in biological system
- (b) Differences between hydrogen, ionic and covalent bond
- (c) Fossil fuel and its environmental implications
- (d) POPs and its environmental impact

(Section- B)

(Long Answer Type Questions)

Note: Attempt any three questions. Each question carries 12 marks.

3 X 12 = 36

3. What is GWP and COP? When COP 28 will be held? Describe impact of climate change on biodiversity, agriculture and weather pattern? (4+8=12)

OR

3. What is chapmann cycle? What is ozone hole ? Why is there a ozone hole over Antarctica? (4+3+5)
4. What is eutrophication and biomagnifications? What are the effects of eutrophication? How can you control it? (6+3+3)

OR

4. What are micro-nutrient and macro-nutrient elements? Describe environmental and health effect of Chromium (Cr), mercury (Hg), cadmium (Cd)? (4+8)
5. What are free radicals? How it is formed and what is the role of free radicals in biological system and environment? (12)

OR

5. What is the role of microorganisms in different steps of nitrogen cycle? What is the impact of nitrogen cycle on environment? (12)
