

(A-35)

SARDAR PATEL UNIVERSITY
M. Sc. -Integrated Biotechnology – Seventh Semester Examination
Saturday, 18th April 2015
Time: 10:30 am to 01:30 pm
PS07CIGEB1: Environmental Chemistry

Total Marks – 70

- Q.1** Mark the right answer of following questions. **[08]**
1. What is Summer smog also known as _____?
a. Particulate smog b. Photochemical smog c. Litho-historical smog d. None of these
 2. The major reservoir for phosphorus is _____.
a. Aquifers b. The atmosphere c. Soil and rocks d. All of these
 3. Soil profile refers to an arrangement within a soil of _____.
a. Its horizontal layout c. Size of soil particles
b. Vertical layout d. None of these
 4. The unfavorable alteration of environment due to human activities is termed as _____.
a. Ecological disturbance c. Ecological degradation
b. Catastrophe d. Pollution
 5. Which of the following contains a lot of carbon?
a. Fossil fuel b. The ocean c. Peat d. All of these
 6. Which is the correct sequence of how nitrogen is passed through its cycle?
a. Fixation, nitrate formation, denitrification c. Nitrate formation, fixation, Denitrification
b. Denitrification, nitrate formation, Fixation d. Fixation, denitrification, nitrate formation
 7. What does EPA stand for?
a. Earth Protection Association c. Environmental Protection Agency
b. Environmental Project Assistant d. Environmental Protection Authority
 8. What is the primary effect of excess phosphorus in the aquatic environment called?
a. Fixation b. Dissimilation c. Eutrophication d. Radiation
- Q.2** Answer the following questions. (ANY SEVEN OUT OF NINE) **[14]**
1. Write the examples and sources of air pollutants.
 2. What is eutrophication? Which are the major controlling measures of this?
 3. "Acid Rain is global ecological manmade problem" Justify.
 4. What is the difference between point source and non-point source pollution?
 5. What is photochemical smog? Which pollutants are included in this?
 6. Define soil erosion. Write mechanisms of soil erosion.
 7. What is humus? Write the composition of humus.
 8. What are the nitrogen reservoirs? Explain ammonification.
 9. Draw the sulfur cycle.

(P.T.O.)

- Q.3** A. What is nitrogen fixation? Describe ammonium assimilation in detail. [06]
B. Outline the process of chemoautotrophic sulfur oxidation and sulfur reduction. [06]
OR
B. Write a detailed note on carbon cycle. [06]
- Q.4** A. Discuss the impacts of air pollutants on living and non-living things. [06]
B. What is global warming? Write a note on formation of acid rain. [06]
OR
B. Write short notes on the following: [06]
I) Ozone depletion II) Impacts of Green House Effect
- Q.5** A. Define soil pollution. Write the physical and chemical properties of soil. [06]
B. Write a note on physicochemical treatment processes for contaminated soil. [06]
OR
B. Which are the sources of soil pollution? Explain the biological properties of soil. [06]
- Q.6** A. What are the sources of water pollutants? Describe the physicochemical properties of water. [06]
B. Mention the types of water pollution. Illustrate the detrimental effects of organic water pollutants. [06]
OR
B. Discuss the adverse effects of pesticides and metal ions. [06]