

**BACHELOR OF SCIENCE (CBCS - 2016 COURSE)**  
**T. Y. B Sc. Sem-V : WINTER :- 2021**  
**SUBJECT: CHEMISTRY : ENVIRONMENT CHEMISTRY-I**

Day : Tuesday  
Date 1/2/2022

W-14947-2021

Time : 02:00 PM-05:00 PM  
Max. Marks: 60

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
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**Q.1** Attempt **ANY TWO** of the following: [12]

- a) Explain EI NINO PHENOMENON. Explain its effects on World's economy.
- b) Explain Ozone depletion and its impact on human health.
- c) What are the broad classification of water-pollutants? Discuss.

**Q.2** Attempt **ANY TWO** of the following: [12]

- a) Describe Miller's experiment for simulation of primitive earth atmosphere.
- b) What are classification of Primary-Pollutants? Explain in detail sources and sinks of Co pollution. How control of Co pollution is carried out?
- c) Explain in detail 'The Nitrogen-cycle'. Explain Nitrogen Transformations reactions by Bacteria.

**Q.3** Attempt **ANY TWO** of the following: [12]

- a) Explain analysis of Dissolved Oxygen (DO) by Winkler's method and Polarographic method.
- b) What is photochemical-Smog? Explain the probable mechanism of smog forming reactions.
- c) Write notes on:
  - i) Eutrophication
  - ii) Marine pollution

**Q.4** Attempt **ANY THREE** of the following: [12]

- a) Describe the methods for analysis of ammonia in water-sample.
- b) Write short note on 'Acid-Rain'. Explain its detail photochemical reaction.
- c) Explain COD and BOD method for determining the organic load of waterbody.
- d) Enlist human activities responsible for changing the meteorology of earth.

**Q.5** Attempt **ANY FOUR** of the following: [12]

- a) What is environmental impact of water pollution caused by pesticides?
- b) Explain complexation reactions in natural water and waste water by naturally occurring chelating agents
- c) What are Particulate Matter? Write short note on Organic Particulate.
- d) Describe methods for the estimation of 'Dissolved Oxygen' in water sample.
- e) Explain how PAN is formed in smog-producing chain reaction.

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