## UNIVERSITY OF THE PUNJAB

B.S. 4 Years Program : Seventh Semester – Fall 2021

Paper: Environmental Chemistry Course Code: CHEM-401

Roll No. ....

Time: 3 Hrs. Marks: 60

## Q.1. Answer the following short questions:

(15x2=30)

- i. What species are responsible for the removal of hydroxyl radicle from the unpolluted atmosphere?
- ii. Briefly explain Eutrophication and its effects on marine life?
- iii. What is the use of trickling filters and biological contactors in secondary water treatment?
- iv. What are the objectives of teaching environmental chemistry?
- v. How is ozone used as disinfectant?
- vi. What do you mean by term Polar Vortex?
- vii. Briefly explain tropopause and lapse rate?
- viii. Define particulate matter. How these particulate matters can be removed from atmosphere?
- ix. How do industrial pollutants can be minimized?
- x. Discuss the impacts of modern life-style on environment?
- xi. Briefly explain smog and its effects on human?
- xii. What do you mean by aerosols? Give various sources and sinks of aerosols?
- xiii. Give sources and sinks of oxides of NO<sub>x</sub> in atmosphere?
- xiv. How do phosphates pollute water quality?
- xv. Briefly explain acid rain and its effects on human and animals?

## Q.2. Answer the following questions.

(6x5=30)

- a. List the anthropogenic and natural sources of NO<sub>x</sub> pollution. Also discuss the effects of NO<sub>x</sub> pollution?
- b. What are detergents? Give its classification and explain its effects on aquatic system?
- c. Give the mechanism of Green House and Enhanced Green House effect.
- d. What is temperature inversion? How does this takes place? What are the impacts of temperature inversion?
- e. Discuss Environmental Education and Environmental Degradation in detail?
- f. What is ozone depletion? What are biological consequences of ozone depletion?