



UNIVERSITY OF THE PUNJAB

Seventh Semester – 2019

Examination: B.S. 4 Years Program

Roll No. in Fig.

Roll No. in Words.

PAPER: Environmental Chemistry

MAX. TIME: 15 Min.

Course Code: CHEM-401 Part-I (Compulsory)

MAX. MARKS: 10

Signature of Supdt.:

Attempt this Paper on this Question Sheet only.

Please encircle the correct option. Division of marks is given in front of each question.

This Paper will be collected back after expiry of time limit mentioned above.

Q.1. Encircle the right answer, cutting and overwriting is not allowed. (1x10=10)

- i) Which of the following is major source of hydrocarbons emission
 - a) Automobile
 - b) Coal
 - c) Wood
 - d) Petroleum
- ii) Which of the following is classified as INDOOR pollutant
 - a) Sulphur Dioxide
 - b) Nitrous Oxide
 - c) Radon
 - d) Helium
- iii) Which of the following conditions show the polluted environment
 - a) pH of rain water is 5.6
 - b) BOD of wastewater is 10ppm
 - c) Eutrophication
 - d) All of these
- iv) As suggested by EPA, permissible value of BOD in wastewater is
 - a) Upto 80ppm
 - b) Upto 100ppm
 - c) Upto 150ppm
 - d) Upto 180ppm
- v) The process of nutrient Enrichment is termed as
 - a) Eutrophication
 - b) Enrichment
 - c) Leaching
 - d) Bioaccumulation
- vi) Which of the following energy resource less contribute Global Warming?
 - a) Coal
 - b) Petroleum products
 - c) LPG
 - d) Nuclear Energy

P.T.O.

vii) Temporary acid rain due to the release of _____ by volcanic eruption.

- a) H_2SO_4
- b) HCl
- c) HNO_3
- d) H_2CO_3

viii) The top of an underground area where the soil and rock particles are saturated with water is called

- a) Leachate
- b) Water Table
- c) Run off
- d) All of these

ix) Following cause alkalinity as well as hardness in water

- a) CaCO_3
- b) $\text{Ca}(\text{HCO}_3)_2$
- c) CaCl_2
- d) CaSO_4

x) Which of the following is an example of point source pollution?

- a) Acid Rain
- b) Fertilizer Run off
- c) Untreated Sewage
- d) Pathogen contamination





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Roll No.

PAPER: Environmental Chemistry

Course Code: CHEM-401 Part – II

MAX. TIME: 2 Hrs. 45 Min.

MAX. MARKS: 50

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Q.2. Give short answers of the following questions.

(10x2=20)

- i. What do you mean by the term Bioaccumulation?
- ii. Give temperature and pressure variation in Troposphere?
- iii. How COD of wastewater can be measured?
- iv. Give the Sources and Sink of oxides of Carbon in atmosphere.
- v. Discuss Radon as Indoor pollutant.
- vi. Differentiate between Primary and Secondary pollutants.
- vii. What do you mean by the term POLAR VORTEX?
- viii. How fertilizers affects the quality of waterways?
- ix. What are the harmful effect of lead in water ways?
- x. How Acid Rain affects the Masonry Buildings?

Q.3. Give brief answers of the following questions.

(6x5=30)

- a) Discuss CFC's and Methane as Green House Gases?
- b) How Heavy Metals contribute water pollution?
- c) Give various types of water pollution.
- d) Briefly explain the physical classification of Environment.
- e) Explain Activated Sludge Process.
- f) Discuss Environmental Management System (EMS)?