

Environmental Chemistry

1. Air Pollution – Part I

- Q 1. Environmental Studies involves study of following things in environment.
 (A) Origin of chemical species
 (B) Reaction of chemical species
 (C) Effect of chemical species
 (D) All of these
- Q 2. DDT is a
 (A) Bio – degradable Pollutant
 (B) Non Bio – degradable Pollutant
 (C) Air Pollutant (D) Non – Pollutant
- Q 3. Troposphere lie in between
 (A) 0 – 10 Km (B) 10 Km – 50 Km
 (C) 0 – 20 Km (D) 50 – 100 Km
- Q 4. The air pollution is mainly due to
 (A) Stratospheric pollution
 (B) Tropospheric Pollution
 (C) Both A & B
 (D) Solid Particles in Air
- Q 5. The presence of SO₂ in air as pollutant causes
 (A) Irritation, tears in eye
 (B) Stiffness in flow binds
 (C) Asthama (D) All of these
- Q 6. NO gas is formed in
 (A) Tropospheric Region
 (B) Stratospheric Region
 (C) Both A & B (D) None of these
- Q 7. Which of the following Problem is caused by Presence of NO₂ in air ?
 (A) Redness in Eye (B) Lung irritant
 (C) Asthama (D) None of these
- Q 8. **Assertion (A):** The catalytic convertor in the car's exhaust system converts polluting exhaust gases into non – toxic gases.
Reason (R): Catalytic convertor contains a mixture of transition metal and their oxides embedded in the inner support. [AIIMS 2013]
 (A) Both A & R are true and R is the correct explanation of A
 (B) Both A & R are true and R is NOT correct explanation of A
 (C) if A is true but R is false
 (D) if A is false but R are ture

- Q 9. **Assertion (A):** Green house effect was observed in house used to grow plants and these are made of green glass.
Reason (R): Green house name has been given because glass houses are made of green glass. [AIIMS 2015]
 (A) Both A & R are true and R is the correct explanation of A
 (B) Both A & R are true and R is NOT correct explanation of A
 (C) if A is true but R is false
 (D) if A is false but R are ture
- Q 10. Which of the following is NOT a green house gas? [AIIMS 2003, 2008]
 (A) CH₄ (B) H₂O
 (C) CFC (D) SO₂
- Q 11. Presence of hydrocarbon in air causes
 (A) Cancer (B) Asthma
 (C) Respiratory diseases
 (D) Lower rate of Photosynthesis
- Q 12. The pH of Normal Rain water is
 (A) 7 (B) 4 (C) 5.5 (D) 9
- Q 13. Acid Rain is due to presence of following gas in air.
 (A) CO₂ (B) CH₄
 (C) SO₂ (D) CO

2. Air Pollution – Part II

- Q 1. SMOG is formed by
 (A) Viable Pollutant (B) Non-Viable Pollutant
 (C) Solid Pollutant (D) Gaseous Pollutant
- Q 2. Photochemical SMOG is formed in
 (A) Cold days (B) Dry , Sunny days
 (C) In presence of FOG (D) None of these
- Q 3. Point out the true statement. [AIIMS 2014]
 (A) Photochemical SMOG occurs in a day time
 While, the classical smog occur in the morning hours
 (B) Classical SMOG has an oxidising character whereas, the photochemical SMOG is reducing in character

- (C) During formation of SMOG, the level of Ozone in the atmosphere goes down.
 (D) classical SMOG is good for health but not Photochemical SMOG.
- Q 4. Which of the following statement is false?
 [AIIMS 2012]
 (A) Photochemical SMOG causes irritation in eye
 (B) London SMOG is a mixture of Smoke & Fog
 (C) Photochemical SMOG result into formation of PAN
 (D) London SMOG is oxidising in nature
- Q 5. **Assertion (A):** London SMOG is produced when Carbon soot particles combine with gaseous oxide of Sulphur.
Reason (R): Presence of carbon particles and SO₂ makes it reducing in nature. [AIIMS 2017]
 (A) Both A & R are true and R is the correct explanation of A
 (B) Both A & R are true and R is NOT correct explanation of A
 (C) if A is true but R is false
 (D) if A is false but R are true
- Q 6. PAN causes
 (A) Asthma (B) Lung Irritant
 (C) Eye Irritant (D) Headache
- Q 7. Stratospheric pollution is caused by
 (A) Hydrocarbon (B) CFC
 (C) Ozone (D) SO₂
- Q 8. Ozone in stratosphere is depleted by
 [AIIMS 2004]
 (A) CF₂Cl₂ (B) C₇F₁₆
 (C) C₆H₆Cl₆ (D) C₆F₆
- Q 9. Which Pollution causes more harmness
 (A) Air Pollution (B) Soil Pollution
 (C) Water Pollution
 (D) Water Pollution caused by Lead
- Q 10. Which of the following is a point source of water pollution?
 (A) Agriculture Farm
 (B) Animal Farm
 (C) Sweage
 (D) Crop Land
- Q 11. Which pollutant is most harmful water pollutant?
 (A) Organic Waste (B) Pathogens
 (C) Chemical Pollutant (D) Solid Pollutant
- Q 12. For Clean Water, BOD upper limit is
 (A) 5 ppm (B) 10 ppm
 (C) 17 ppm (D) 20 ppm
- Q 13. Which chemical pollutant is more dangerous?
 (A) Heavy metals (B) H₂SO₄
 (C) Oil (D) Detergent
- Q 14. Eutrophication is caused by presence of
 (A) Chemical Pollutant in water
 (B) Pathogens in water
 (C) Organic Waste in water
 (D) Soluble Pollutant in water
- Q 15. The international standard of drinking water has fluoride content as
 (A) < 1 ppm (B) < 50 ppb
 (C) < 500 ppb (D) < 1000 ppm
- Q 16. In drinking water, the lead content should be
 (A) < 50 ppm (B) < 50 ppb
 (C) < 500 ppb (D) < 500 ppm
- Q 17. The international standard of drinking water has sulphate content as
 (A) < 50 ppm (B) < 50 ppb
 (C) < 500 ppm (D) < 500 ppb
- Q 18. The international standard of drinking water has Nitrate content as
 (A) < 50 ppm (B) < 50 ppb
 (C) < 500 ppm (D) < 500 ppb

3. Water Pollution & Soil Pollution

- Q 1. Which source of water pollution can be easily identified?
 (A) Point Source (B) Non – Point Source
 (C) Raw Source (D) Combined source
- Q 2. Radioactive waste is not produced by
 (A) Mining of ore (B) Nuclear reactor
 (C) Nuclear Explosion (D) Use of Fertilizer
- Q 3. For most pollutant water, BOD is
 (A) > 10 ppm (B) > 15 ppm
 (C) > 17 ppm (D) > 25 ppm
- Q 4. Which of the following statements is wrong?
 [AIIMS 2010]
 (A) Fuel obtained from plastic waste has high octane rating
 (B) H₂O₂ with suitable catalyst is now used in bleaching of paper

- (C) Now a days ethanol is produced in one step oxidation of ethane in presence of ionic catalyst in aqueous medium.
- (D) The growth of fish gets inhibited, if the concentration of dissolved oxygen of water is over 6 ppm.
- Q 5. Which of the following is biodegradable pesticides?
 (A) DDT (B) Aldrin
 (C) Organo – Phosphate (D) Chlorates
- Q 6. Which causes birth defect?
 (A) Pesticides (B) Herbicides
 (C) Air pollutant (D) Bio–degradable pollutant
- Q 7. Which industry waste is more harmful?
 (A) Textile (B) Paper
 (C) Metal (D) Food Processing unit
- Q 8. What are the steps to control environmental pollution?
 (A) waste management
 (B) Application of green chemistry
 (C) Controlled use of chemicals
 (D) All of these
- Q 9. Which is not an example of green chemistry?
 (A) Dry cleaning of cloths by using H_2O_2 in place of C_2Cl_4
 (B) H_2O_2 is used to bleach paper in place of Cl_2
 (C) using natural fertilizer in place of chemical fertilizer
 (D) using catalyst
- Q 10. Which of the following is not a region of atmosphere?
 (A) Stratosphere (B) Mesosphere
 (C) Thermosphere (D) Dextrosphere
- Q 11. Soil pollution is caused by
 (A) man made (B) Natural
 (C) Both (D) None
- Q 12. Green chemistry involves
 (A) Stopping industrial works
 (B) Using alternative method to produce desired material or effect to cause less harm to environment.
 (C) using catalyst in chemical reaction
 (D) using high temperature

Answer Key

1. Air Pollution – Part I

- (1). D (2). B (3). A
 (4). C (5). D (6). C
 (7). B (8). A (9). A
 (10). D (11). A (12). C
 (13). C

2. Air Pollution – Part II

- (1). B (2). B (3). A
 (4). D (5). A (6). C
 (7). B (8). A (9). A
 (10). C (11). B (12). A
 (13). A (14). C (15). A
 (16). B (17). C (18). A

3. Water Pollution & Soil Pollution

- (1). A (2). D (3). C
 (4). D (5). C (6). B
 (7). C (8). D (9). D
 (10). D (11). C (12). B