



**DELHI PUBLIC SCHOOL NEWTOWN**  
**SESSION 2024-25**  
**MONDAY TEST**

**CLASS: IX**  
**SUBJECT: ENVIRONMENTAL SCIENCE**

**FULL MARKS: 40**  
**DATE: 25.11.24**

**General Instructions:**

- All questions are compulsory.
- Marks will be deducted for spelling errors.
- The paper consists of *three* printed pages.

**SECTION A (20 Marks)**

**Question 1**

**[1×8=8]**

Choose the correct answers to the questions from the given options.  
(Do not copy the questions, write the correct answers only)

- (i) Common gaseous pollutants are  
(a) Carbon monoxide, sand, nitrogen dioxide and oxygen  
(b) Carbon monoxide, CFC, oxygen and ozone  
(c) Carbon monoxide, oxygen, sand and steam  
(d) Carbon monoxide, CFCs, ozone and nitrogen dioxide
- (ii) Which of the following gases is NOT considered a greenhouse gas?  
(a) Carbon dioxide ( $\text{CO}_2$ )  
(b) Methane ( $\text{CH}_4$ )  
(c) Nitrogen ( $\text{N}_2$ )  
(d) Water vapour ( $\text{H}_2\text{O}$ )
- (iii) How does the presence of sulphur dioxide ( $\text{SO}_2$ ) in the atmosphere contribute to environmental issues?  
(a) It enhances photosynthesis in plants  
(b) It leads to the formation of acid rain, which harms ecosystems and structures  
(c) It increases the greenhouse effect  
(d) It is a harmless by product of industrial activities
- (iv) Assertion (A): Thermal inversion can lead to increased air pollution levels in urban areas.  
Reason (R): During a thermal inversion, a layer of warm air traps cooler air at the surface, preventing the dispersion of pollutants.  
(a) Both A and R are true, and R is the correct explanation for A  
(b) Both A and R are true, but R is not the correct explanation for A  
(c) A is true, but R is false  
(d) A is false, but R is true
- (v) Which of the following statements best explains the role of aerosols in the atmosphere and their impact on climate change?  
(a) Aerosols always contribute to global warming by trapping heat in the atmosphere.  
(b) Aerosols can both cool and warm the atmosphere; they reflect sunlight, which can

lead to cooling, but they also absorb heat, contributing to warming.

- (c) Aerosols have no significant impact on climate.
  - (d) Aerosols are only harmful to human health and do not affect weather patterns.

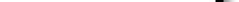
- (vi) The primary cause of ozone depletion in the stratosphere is the release of \_\_\_\_\_ into the atmosphere.

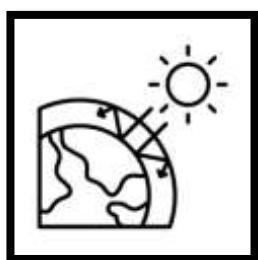


- (vii) Which of the following statements about ozone is incorrect?

- Which of the following statements about ozone is incorrect?

  - (a) Ozone in the stratosphere protects life on Earth by absorbing harmful ultraviolet (UV) radiation from the Sun
  - (b) Ground-level ozone is a primary pollutant formed directly from vehicle emissions
  - (c) Ozone in the troposphere can cause respiratory problems and is a major component of smog
  - (d) The depletion of stratospheric ozone is largely caused by human-made chemicals, such as halons.

- (viii)  Identify the environmental phenomenon depicted in the picture



**Identify the environmental phenomenon depicted in the picture given.**

- (a) Ozone depletion                          (b) Acid rain  
(c) Global warming                            (d) Precipitation

## Question 2

$$[2 \times 6 = 12]$$

- (i) Poor air quality negatively impacts the economy of a country. Justify stating two reasons.

(ii) CO is considered to be more harmful than CO<sub>2</sub>. Do you agree? Justify.

(iii) Why do you think Delhi gasps for fresh air especially during winter?

(iv) The discoloration of Taj Mahal is a major concern. Analyze the reason behind it.

(v) Cattle farming and landfills are contributing significantly to greenhouse effect. Justify.

(vi) Why do you think we should discourage the use of coolants in refrigerators and use of foam products in home insulation?

## **SECTION B ( 20 Marks)**

### Question 3

- (i) Ozone layer depletion causes increased UV radiation levels at the earth's surface, which is damaging to human health and environment. Comment. [5]

(ii) Los Angeles is nestled in a low elevation pocket known as the San Fernando Valley. The city is also close to the equator, receiving more direct sunlight and is sandwiched between the San Gabriel Mountains and the Pacific coastline. How do you think the location of Los Angeles affects its environmental quality? [5]

## Question 4

- (i) The Sundarbans mangrove forest of Bangladesh provides ecosystem services having [5] great importance for local livelihoods, national economy and global environment.

Nevertheless, the Sundarbans is threatened by various natural and anthropogenic pressures including climate change. What do you think are the ecological consequences of global warming and climate change on coastal ecosystems?

(ii)



Study the picture given above and answer the questions that follow.

[5]

- (a) Which major incident took place on the said date?
- (b) Name the factory depicted in the given picture.
- (c) Why do you think this incident became so remarkable? State three reasons.