

## Questions with Answer Keys

MathonGo

## Q1 (20 July 2021 Shift 1)

Green chemistry in day-to-day life is in the use of:

- (1) Chlorine for bleaching of paper
- (2) Large amount of water alone for washing clothes
- (3) Tetrachloroethene for laundry
- (4) Liquified  $\text{CO}_2$  for dry cleaning of clothes

## Q2 (20 July 2021 Shift 2)

Which one of the following gases is reported to retard photosynthesis?

- (1) CO
- (2) CFCs
- (3)  $\text{CO}_2$
- (4)  $\text{NO}_2$

## Q3 (22 July 2021 Shift 1)

The water having more dissolved  $\text{O}_2$  is :

- (1) boiling water
- (2) water at  $80^\circ\text{C}$
- (3) polluted water
- (4) water at  $4^\circ\text{C}$

## Q4 (25 July 2021 Shift 1)

Which one of the following chemical agent is not being used for dry-cleaning of clothes?

- (1)  $\text{H}_2\text{O}_2$
- (2)  $\text{CCl}_4$
- (3) Liquid  $\text{CO}_2$
- (4)  $\text{Cl}_2\text{C} = \text{CCl}_2$

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## Q5 (25 July 2021 Shift 2)

Given below are two statements:

Statement I : Chlorofluoro carbons breakdown by radiation in the visible energy region and release chlorine gas in the atmosphere which then reacts with stratospheric ozone. Statement II : Atmospheric ozone reacts

with nitric oxide to give nitrogen and oxygen gases, which add to the atmosphere. For the above statements

choose the correct answer from the options given below :

- (1) Statement I is incorrect but statement II is true
- (2) Both statement I and II are false
- (3) Statement I is correct but statement II is false
- (4) Both statement I and II are correct

## Q6 (27 July 2021 Shift 1)

Which one of the following statements is NOT correct?

- (1) Eutrophication indicates that water body is polluted?
- (2) The dissolved oxygen concentration below 6 ppm inhibits fish growth
- (3) Eutrophication leads to increase in the oxygen level in water
- (4) Eutrophication leads to anaerobic conditions

## Q7 (27 July 2021 Shift 2)

Match List - I with List - II :

	List - I (compound)		List - II (effect/affected species)
(a)	Carbon monoxide	(i)	Carcinogenic
(b)	Sulphur dioxide	(ii)	Metabolized by pyrus plants
(c)	Polychlorinated biphenyls	(iii)	Haemoglobin
(d)	Oxides of Nitrogen	(iv)	Stiffness flower buds

Choose the correct answer from the options given below:

- (1) (a) - (iii), (b) - (iv), (c) - (i), (d) - (ii)



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### Answer Key

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**Q1 (4)**

**Q2 (4)**

**Q3 (4)**

**Q4 (2)**

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**Q5 (2)**

**Q6 (3)**

**Q7 (1)**

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## Hints and Solutions

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Q1

Chlorine gas was used earlier for bleaching paper. These days, hydrogen peroxide ( $\text{H}_2\text{O}_2$ ) with suitable catalyst.

Tetra chloroethene ( $\text{Cl}_2\text{C} = \text{CCl}_2$ ) was earlier used as solvent for dry cleaning. The compound contaminates the ground water and is also a suspected carcinogen. Replacement of halogenated solvent by liquid  $\text{CO}_2$  will result in less harm to groundwater.

Hence given statement (4) is correct.

Q2

According to NCERT only  $\text{NO}_2$  from the given options can retard the photosynthesis process in plants.

Q3

On heating concentration of  $\text{O}_2$  in water decreases. So boiling water and water at  $80^\circ\text{C}$  having less  $\text{O}_2$  concentration. Polluted water also having less  $\text{O}_2$  concentration. So water at  $4^\circ\text{C}$  having maximum  $\text{O}_2$  concentration.

Q4

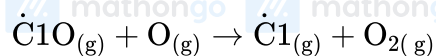
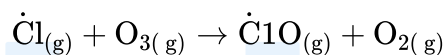
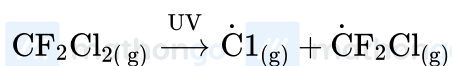
$\text{CO}_2$ ,  $\text{CCl}_4$  and  $\text{Cl}_2\text{C} = \text{CCl}_2$  are used as dry

cleaning agents for clothes.  $\text{H}_2\text{O}_2$  is used as bleaching agent in laundry.

Q5

Statement (1)

CFCs are broken down by powerful UV radiation and releases chlorine free radical which reacts with ozone and start chain reaction.



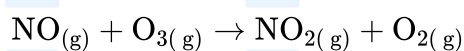
Statement (2)

## Hints and Solutions

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Atmosphere ozone reacts with nitric oxide to

produce nitrogen dioxide and oxygen.



## Q6

Eutrophication leads to decrease in oxygen level of water. 3<sup>rd</sup> statement is incorrect