

Chapter – 3

Air

Evaluation

I. Choose the correct answer:

Question 1.

Chlorofluorocarbon is used in

- a) refrigerator
- b) air conditioners
- c) Both a & b
- d) None

Answer:

(c) Both a & b

Question 2.

Which of the following gas is released by automobiles?

- a) Carbon monoxide
- b) Oxygen
- c) Hydrogen
- d) Nitrogen

Answer:

(a) Carbon monoxide

Question 3.

A wind mill is used to produce.

- a) chemical energy
- b) mechanical energy
- c) electric energy
- d) All of these

Answer:

(c) electric energy

Question 4.

Influenza is caused by

- a) fungus
- b) bacteria
- c) virus
- d) protozoa

Answer:

(c) virus

Question 5.

Height of mesosphere which lies after troposphere is

- a) 70 to 75km
- b) 75to 80 km
- c) 80 to 85 km
- d) 85to 90 km

Answer:

(c) 80 to 85 km

II. Fill in the blanks:

Question 1.

Second highest layer of Earth's atmosphere is _____.

Answer:

Thermosphere

Question 2.

Releasing substances like chemical compounds into the atmosphere is known as _____.

Answer:

Air pollution

Question 3.

Airborne diseases can be caused by _____.

Answer:

Microorganisms

Question 4.

The _____ layer protects us from the harmful UV rays coming from the sun.

Answer:

Ozone

Question 5.

_____ is used by plants as nitrates.

Answer:

Nitrogen

III. Match the following:

1. Troposphere	a. Satellite
2. Stratosphere	b. Ozone layer
3. Exosphere	c. Weather change
4. Thermosphere	d. Spacecraft
5. Mesosphere	e. Meteors

Answer:

1. Troposphere	a. Weather change
2. Stratosphere	b. Ozone layer
3. Exosphere	c. Satellite
4. Thermosphere	d. Space craft
5. Mesosphere	e. Meteors

IV. Answer briefly:**Question 1.**

What are the different layers of atmosphere?

Answer:

- Atmosphere is divided into five different layers.
- The layers from the bottom upwards are called Troposphere, Stratosphere, Mesosphere, Thermosphere, and Exosphere.

Question 2.

What is air pollution?

Answer:

The presence of harmful substances in the air which can have an adverse effect on living beings and the environment is called air pollution.

Question 3.

Name some of the airborne diseases.

Answer:

Diphtheria, Whooping Cough, and Tuberculosis are some of the common airborne diseases caused by bacteria.

Question 4.

What is global warming?

Answer:

- Air pollution results in the accumulation of carbon dioxide in the atmosphere.
- When gases like carbon dioxide are present in the atmosphere in a large amounts, they increase the atmospheric temperature.

Question 5.

Mention two ways of controlling air pollution.

Answer:

- Using public modes of transport can reduce the rate of pollution.
- By reducing the usage of fossil fuels for burning.

V. Answer in detail:**Question 1.**

List the importance of air.

Answer:

- Air is important for all living organisms.

- Without air no life can exist on the Earth.
- We take in oxygen from the air and release carbon dioxide. :
- Plants in turn use carbon dioxide present in the air to produce their food.
- The gases such as oxygen, nitrogen, carbon dioxide, and hydrogen present in the air are important to us for many reasons.

Water Cycle:

Water vapour present in the air is important for the formation of water cycle.

Supplies Energy:

- We breathe oxygen present in the air and it is supplied to the cells in our body.
- Body cells burn the food molecules with the help of oxygen and produce energy.

Sound travels through air:

Sound travels from the point of generation to the listener through air.

Useful for plants:

- Nitrogen present in the air is useful for plants.
- The nitrogen in the atmosphere is converted into easily absorbable nitrates by plants with the help of some microbes.

Transport:

- Movement of air is called wind.
- This is helpful for the ships and boats to sail on the water. Airplanes and helicopters travel through air.

Sports:

- Paragliding and hang gliding are air sports and they are possible with the help of air.
- Other sports like windsurfing, kite surfing, and sailing are also possible with the help of air.

Parachutes and Hot air balloons:

- Parachutes and hot air balloons are used to land from above.
- In case of emergency, people use parachutes and come down slowly and safely with the help of air.

Wind energy:

- Air flows from a region of high pressure to low pressure.
- This flow of air at high speed is called wind.
- This wind is used to generate electric power with the help of windmills.

Question 2.

Explain any three airborne diseases.

Answer:**Common cold:**

- Common cold is an infectious disease which affects the upper respiratory system like the nose and throat and it is easily spread.
- Symptoms of the common cold include cough, painful throat, running nose, and sometimes fever.
- Though many viruses can cause this, it is generally caused by Rhinovirus.

Influenza:

- Influenza is commonly found during childhood.
- It is caused by the virus, Myxo virus, and results in inflammation of nasal mucosa and pharynx.
- It is also known as flu.

Mumps:

- It is caused by Myxovirus parotitis and it affects the upper respiratory tract.
- Some of the common symptoms of mumps include fever, headaches, sore throat, and swelling of parotid glands which makes jaw movement difficult.

VI. Higher-order Thinking Questions:

Question 1.

If there is no atmosphere, what will be the condition of Earth?

Answer:

Without atmosphere means no life as there will be no oxygen which is essential for Earth's organism to thrive on the planet Earth.

Question 2.

Give some suggestions to prevent air pollution.

Answer:

- Planting more trees can reduce the amount of carbon dioxide in the atmosphere.
- Reduce the use of automobiles and use public transports.
- Avoid aerosol spray products.