

## 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.