

Chapter 15. Air Around Us

Very Short Q&A:

Q1: We can see air around us. True/ False

Ans: False

Q2: We cannot see air but can _____ it.

Ans: Feel

Q3: Why pages of an open book begin fluttering when the fan is switched on?

Ans: Because of air

Q4: Moving air helps in flying kite. True/ False

Ans: True

Q5: When does winnowing is more effective?

Ans: In presence of air

Q6: Which of the two can uproot trees and blow off the roof tops, air or storm?

Ans: Storm

Q7: State two properties of air.

Ans: Air has weight and it occupies space.

Q8: What is air made up of?

Ans: Gases

Q9: The presence of water vapour in air is important for:

- a. Combustion
- b. Water cycle
- c. Air pollution

Ans: Water cycle

Q10: Air has

- a. Oxygen
- b. Carbon dioxide
- c. Nitrogen
- d. All of these

Ans: All of these

Q11: Air is the _____ of gases.

Ans: Mixture

Q12: Define atmosphere.

Ans: Atmosphere is a thick layer of air surrounding the earth.

Q13: Air occupies _____ and has _____.

Ans: Space and has weight.

Q14: Name the gas which forms the major part of air.

Ans: Nitrogen

Q15: Nitrogen supports burning of a candle. True/ False.

Ans: False

Q16: Animals consume oxygen for _____ and produce carbon dioxide.

Ans: Breathing

Q17: Dust particles are always present in air. True/ False.

Ans: True

Q18: Ram is breathing with his mouth, is it write, if no why?

Ans: No, because dust particles may enter into his body.

Q19: Have you ever seen tiny shining particles in the beam of sunlight, what are these particles?

Ans: Dust particles

Q20: Fine hair and _____ present inside our nose prevents the entry of dust particles into our respiratory system.

Ans: Mucus

Q21: Name the gases present in atmosphere.

Ans: Nitrogen, oxygen, carbon dioxide, water vapour, dust particles and other gases.

Q22: What is the percentage of oxygen in the air?

Ans: 21%

Q23: What is the percentage of nitrogen in the air?

Ans: 78%

Q24: Which of the two gases are present in higher amount in the atmosphere oxygen or carbon dioxide gas?

Ans: Oxygen

Q25: A person is facing breathing difficulty, he will use

- a. Oxygen mask
- b. Water mask
- c. Pollution mask
- d. None of these

Ans: Oxygen mask.

Q26: Name the component of air used by plants to make their food.

Ans: Carbon dioxide gas.

Q27: The layer of air around the earth is known as_____.

Ans: Atmosphere.

Q28: How does an earthworm breathe?

Ans: Through air present in soil.

Q29: Name the food manufacturing process of plants.

Ans: Photosynthesis.

Q30: The _____ is used to draw water from tubewells and to run flourmills.

Ans: Air

Q31: Birds, bats and insects can fly due to the presence of_____.

Ans: Air

Short Q&A:

Q1: What happens when air comes in contact with a cool surface?

Ans: When air comes in contact with a cool surface, it condenses and drops of water appear on cool surface.

Q2: Why do you think mountaineer carry oxygen cylinders with them, while climbing high mountains?

Ans: There is less oxygen at high places like mountains, so they carry oxygen cylinder with them to breathe there.

Q3: Why you feel suffocation in a closed room, where some material is burning?

Ans: Burning of some material releases smoke that contains few gases and fine dust particles that is harmful, thus we feel suffocation in a closed room, where some material is burning.

Q4: Why there are long chimneys in factories?

Ans: Chimneys take the harmful gases and smoke of factories away from our noses.

Q5: Air is necessary for combustion. Explain the statement.

Ans: Fix two candles in middle of a container containing water. Light both candles. Now cover the candles with an inverted transparent glass, you will observe that candles goes off. This happens because of absence of air. Thus we can say that air is necessary for combustion.

Q6: Air occupies space. Explain the statement.

Ans: Blow a balloon, air from your body enters balloon at it gets bigger because air occupies space.

Q7: When the open mouth of an empty bottle is tilted in a bucket filled with water, we see bubbles coming out of it. Explain the phenomenon.

Ans: The bottle contains air so when it was titled air came out in the form of bubbles.

Q8: What is air made up of?

Ans: Air is made up of mixture of gases like - Nitrogen, oxygen, carbon dioxide, water vapour, dust particles and other gases.

Q9: Air contains dust particles, while inhaling air we also inhale dust particles. Give reason in support of the statement, whether it is true or false?

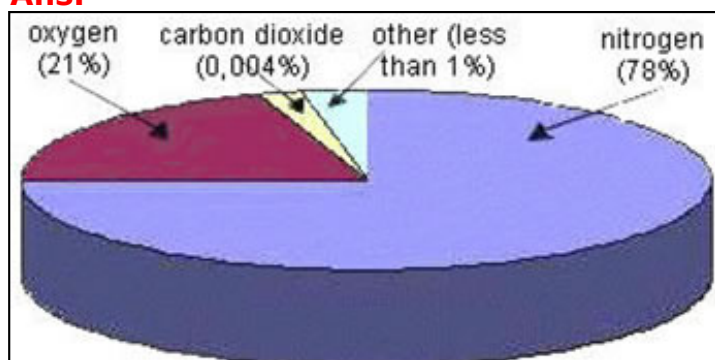
Ans: False, because our nose contains fine hair and mucus that trap all dust particles and prevent its entrance inside our body.

Q10: Why we should not breathe through our mouth?

Ans: If we will breathe through our mouth then dust particles present in air will enter our body and will cause harmful diseases.

Q11: Draw a diagram showing composition of air in atmosphere.

Ans:



Q12: How does an organism living in soil breathe?

Ans: Through air present in soil.

Q13: How can you show that air is dissolved in water?

Ans: Take water in a pan and heat it. After sometimes just before it boils we can observe some bubbles at the inner surface of the pan. This is because of the air dissolved in water.

Q14: Why an animal living in soil does, comes out of soil for respiration in rainy season?

Ans: When it rains heavily, water fills up all the spaces occupied by the air in the soil. Therefore organism living in soil has to come out for respiration.

Q15: Why does a lump of cotton wool shrink in water?

Ans: A lump of cotton wool shrinks in water because water filled up the empty space that the air has occupied.

Q16: List at least five activities that are possible due to the presence of air.

Ans: Respiration, burning, photosynthesis, movement of aeroplane and parachutes, generation of electricity by windmills.

Q17: How do plants and animals help each other in the exchange of gases in the atmosphere?

Ans: Plants and animals help each other in the exchange of gases in the atmosphere. Plants take carbon dioxide to prepare food and release oxygen during daytime. This oxygen is taken in by animals and carbon dioxide is released. Thus, plants and animals help in maintaining balance of oxygen and carbon dioxide.

Long Q&A:

Q1: Explain the role played by air in the life of human, animals and plants.

Ans: Living things cannot live without air. We can survive on planet earth because of atmosphere only. Plants cook their food by the process of photosynthesis because of air only. They use carbon dioxide gas of air and releases oxygen that is utilized by human and animals to breathe in. Air is necessary for combustion, flying of aeroplanes and birds. Thus it is well said Air is life.