

Air Around Us**1-Exercise****Multiple Choice Questions**

1. Which of the following statement(s) is/are correct?
(a) Air is present everywhere
(b) We can feel air
(c) Both the above
(d) None of these
2. Which of the following statement(s) is/are correct?
(a) The moving air is called wind.
(b) We can find the direction in which air is moving at a place.
(c) Weather cock is used to find the direction in which air is moving at a particular place.
(d) All of the above
3. Which of the following statement(s) is/are correct?
(a) Air is a mixture of many gases
(b) Air is a homogeneous mixture
(c) Air is a pure substance
(d) Only (a) and (b) are correct
4. Which of the following statement(s) is/are correct?
(a) In air percentage of nitrogen by volume is 77%
(b) In air percentage of oxygen by volume is 20%
(c) In air percentage of carbon dioxide is only 2.0%
(d) In air percentage of water and argon is 1.0%
5. Which of the following statement(s) is/are correct?
(a) Air is not a matter as it cannot be seen
(b) Air is incompressible
(c) Air exerts pressure
(d) All of the above
6. Which of the following statement(s) is/are correct?
(a) The percentage of oxygen in air inhaled and exhaled by us remains same
(b) Plants use more of oxygen in respiration and produce no oxygen in any of its processes
(c) Plants do not need oxygen for respiration
(d) All of the above
7. Which of the following statement(s) is/are correct?
(a) The planet earth is surrounded by a thin layer of air.
(b) The thin layer of air that surrounds earth extends only upto two kilometres below the surface of earth.
(c) This thin layer of air that surrounds earth is no importance for living beings.
(d) All of the above
8. Which of the following statement(s) is/are correct?
(a) The percentage of nitrogen in air varies from place to place on the earth.
(b) The percentage of oxygen in air varies from place to place on the earth.
(c) Both the above are correct
(d) All of the above
9. Which of the following statement(s) is/are correct?
(a) The animals that live under water cannot use the atmospheric air for their respiration.
(b) The aquatic animals do not need air for respiration.
(c) The aquatic animals use carbon dioxide dissolved in water for their respiration.
(d) All the above are incorrect.
10. Which of the following statement(s) is/are correct?
(a) Carbon dioxide is a colourless gas
(b) Oxygen is an odorless gas
(c) Air contains both oxygen and carbon dioxide
(d) All of the above
11. Which of the following statement(s) is/are correct?
(a) Plants and animals are interdependent.
(b) Plants and animals depend on each other for exchange of oxygen.
(c) Plants and animals depend on each other for exchange of carbon dioxide.
(d) All of the above
12. Which of the following statements is/are correct?
(a) Smoke contains suspended solid particles
(b) Smoke is generally harmful
(c) Both the above are correct
(d) None of the above
13. Which of the following statement(s) is/are correct?
(a) We cannot observe the presence of dust particles in air
(b) Amount of dust particles in air vary from time to time
(c) Both the above are correct
(d) All of the above
14. Farmers plough their fields before they plant seeds because
(a) it loosens the soil and allows the air to enter into the spaces between soil particles

- (b) the sprouting seed will be able to use the trapped air
(c) plants will absorb some air through their roots and also take in water and minerals from the soil
(d) All of the above
- 15.** Which of the following statement(s) is/are correct?
(a) Plants consume more oxygen and produce less oxygen.
(b) Plants consume less oxygen and produce more oxygen.
(c) Plants consume the same amount of oxygen as they produce.
(d) Plants consume a large amount of oxygen during photosynthesis and produce a large amount of carbon dioxide during photosynthesis.
- 16.** Which of the following statement(s) is/are correct?
(a) We make use of wind energy to rotate a windmill
(b) Windmill is used to generate electricity
(c) Windmill is used to run flour mills
(d) All of the above
- 17.** Which of the following statement(s) is/are correct?
(a) Air plays an important role in water cycle.
(b) Birds can fly due to presence of air.
(c) Both the above are correct
(d) None of these
- 18.** When charcoal is burnt in a closed room, it gets suffocating. The gas that is mainly responsible to cause suffocation is
(a) Nitrogen (b) Carbon monoxide
(c) Carbon dioxide (d) None of these
- 19.** If you take water in a glass tumbler and put some ice in it, you will observe some water droplets on the outer surface of tumbler. This shows that
(a) air occupies space
(b) air contains dust particles
(c) water vapours are present in air
(d) air has mass
- 20.** The percentage of which gas is maximum in inhaled air?
(a) Nitrogen (b) Oxygen
(c) Carbon dioxide (d) Other gases
- 21.** The percentage of which gas is maximum in exhaled air?
(a) Nitrogen (b) Oxygen
(c) Carbon dioxide (d) Other gases
- 22.** Guess who am I?
I am present in air. I enter your lungs when you inhale air. You cannot live without me. I give energy to your body.
(a) Hydrogen (b) Oxygen
(c) Nitrogen (d) Carbon dioxide
- 23.** Which of the following statements is wrong?
(a) Air contains dust, water vapour and smoke.
(b) Ozone depletion causes skin cancer.
(c) Acid rain is caused due to air pollution.
(d) None of these
- 24.** Which of the following statements is correct?
(a) Air helps in pollination and in dispersal of seeds.
(b) Air becomes denser as we go on mountains.
(c) Air does not contain dust particles.
(d) Water contains dissolved carbon dioxide.
- 25.** Which of the following can reduce air pollution?
(a) Planting more trees on roadsides
(b) Using CNG in vehicles
(c) Reducing the number of vehicles
(d) All of the above
- 26.** Which gas protects us from ultraviolet rays of the sun?
(a) Oxygen (b) Carbon dioxide
(c) Ozone (d) Nitrogen
- 27.** Which of the following plants do not have stomata?
(i) Hydrilla (ii) Water lily (iii) All of these
(a) Only (ii) is correct (b) Both (i) and (iii)
(c) Only (i) is incorrect (d) Only (iii) is correct
- 28.** A gas that is present in air and makes about 4/5th (by volume) of air. It is also not a supporter of combustion?
(a) Oxygen (b) Nitrogen
(c) Water vapours (d) Hydrogen
- 29.** The gas used by aquatic animals for respiration?
(a) Dissolved nitrogen (b) Dissolved oxygen
(c) Dissolved air (d) None of these
- 30.** Why are chimneys provided in factories?
(a) So as to locate the factories easily.
(b) To take the harmful smoke and gases away from us.
(c) To absorb the dust particles present in smoke before being released to the atmosphere.
(d) All of the above

31. Why do the earthworms come out of soil during heavy rains?
 (a) They come out of soil so as to stay at some dry place.
 (b) They come out of soil for respiration.
 (c) They come out to see the nature when it is raining heavily.
 (d) None of the above
32. Why are plants called oxygen producer?
 (a) They consume oxygen for respiration.
 (b) They consume oxygen for photosynthesis.
 (c) They produce more oxygen during photosynthesis as compared to that they consume for respiration.
 (d) All of the above

2 - Exercise

Match the Column

DIRECTIONS: Match Column-I with Column-II and select the correct answer using the codes given below the columns.

1.

Column-I (Name of gas in Air)	Column-II (% age of gas in air)
(a) Oxygen	(p) 20%
(b) Nitrogen	(q) 79%
(c) Carbon dioxide	(r) 0.04%
(d) Other gases	(s) Less than 1%

- (a) $A \rightarrow (p); B \rightarrow (q); C \rightarrow (r); D \rightarrow (s)$
 (b) $A \rightarrow (q); B \rightarrow (p); C \rightarrow (r); D \rightarrow (s)$
 (c) $A \rightarrow (p); B \rightarrow (q); C \rightarrow (s); D \rightarrow (r)$
 (d) $A \rightarrow (q); B \rightarrow (p); C \rightarrow (s); D \rightarrow (r)$

2.

Column-I	Column-II
(a) Nitrogen	(p) Produced when fuel is burnt
(b) Oxygen	(q) Supporter of combustion
(c) Carbon dioxide	(r) Not a supporter of combustion
(d) Smoke	(s) Colourless, odourless gas that may cause suffocation

- (a) $A \rightarrow (p); B \rightarrow (q); C \rightarrow (r); D \rightarrow (s)$
 (b) $A \rightarrow (q); B \rightarrow (r); C \rightarrow (s); D \rightarrow (p)$
 (c) $A \rightarrow (r); B \rightarrow (q); C \rightarrow (s); D \rightarrow (p)$
 (d) $A \rightarrow (s); B \rightarrow (q); C \rightarrow (p); D \rightarrow (r)$

3.

Column-I	Column-II
(a) Oxygen	(p) Consumed by plants and animals during photosynthesis
(b) Carbon dioxide	(q) Produced by animals during

	respiration
(c) Atmosphere	(r) Animals that live under water
(d) Aquatic animals	(s) Thin layer of air that surrounds the earth

- (a) $A \rightarrow (p); B \rightarrow (q); C \rightarrow (r); D \rightarrow (s)$
 (b) $A \rightarrow (q); B \rightarrow (p); C \rightarrow (s); D \rightarrow (r)$
 (c) $A \rightarrow (p); B \rightarrow (q); C \rightarrow (s); D \rightarrow (r)$
 (d) $A \rightarrow (q); B \rightarrow (p); C \rightarrow (r); D \rightarrow (s)$

Passage Based Questions

DIRECTIONS: Read the passage(s) given below and answer the questions that follow

Passage-1

Until eighteenth century, people thought that air was just one substance. Now it has been experimentally proved that it is really not so. Air is a mixture of gases.

4. Air is
 (a) a mixture of liquids
 (b) a mixture of liquid and gases
 (c) a mixture of gases
 (d) None of these
5. Air
 (a) contains gases and solids
 (b) contains gases and liquids
 (c) contains no solid or liquid
 (d) All of the above
6. Which of the following statement(s) is/are correct?
 (a) Water is present in air in vapour form
 (b) Water is not present in air
 (c) Water is present in air in liquid form
 (d) Water is present in air in solid form

Passage-2

The earth is surrounded by a thin layer of air. Thin layer extends upto many kilometers above the surface of earth and is called atmosphere.

7. Which of the following statement(s) is/are correct?
 (a) The air surrounds the earth.
 (b) The thin layer of air that surrounds the earth extends only upto 2 kilometres above the surface of earth.
 (c) The thin layer of air that surrounds the earth extends upto 2 kms below the surface of earth.
 (d) All of the above are correct.
8. Which of the following statement(s) is/are correct?
 (a) Atmosphere is essential for plants.

- (b) Atmosphere is essential for human beings.
 (c) Atmosphere is essential for life.
 (d) None of these

9. Which of the following statement(s) is/are correct?
 (a) Atmosphere is the envelope of air that surrounds the earth.
 (b) Atmospheric gases contain nitrogen and oxygen.
 (c) Both the above are correct.
 (d) None of these

Passage-3

If in a closed room there is some material that is burning, you may have felt suffocation. This is due to excess carbon dioxide that may be accumulating in the room. Plants and animals consume oxygen for respiration and produce carbon dioxide.

10. Which of the following is produced by animals during respiration?
 (a) Oxygen (b) Nitrogen
 (c) Carbon dioxide (d) All of these
11. Which of the following is consumed by plants and animals during respiration?
 (a) Oxygen (b) Nitrogen
 (c) Carbon dioxide (d) None of these
12. Plants consume which of the following during photosynthesis?
 (a) Oxygen (b) Nitrogen
 (c) Carbon dioxide (d) All of these

Assertion/Reason Based Questions

DIRECTIONS: The questions in this segment consists of two statements, one labelled as assertion 'A' and the other labelled as "reason R". You are to examine these two statements carefully and decide if the assertion A and reason R are individually true and if so, whether the reason is a correct explanation of the assertion. Select your answers to these items using codes given below.

- (a) Both A and R are true and R is the correct explanation of A.
 (b) Both A and R are true but R is not the correct explanation of A.
 (c) A is true but R is false.
 (d) A is false but R is true.

13. **Assertion (A):** Air is a homogeneous mixture of gases.
Reason (R): The composition of every part of a homogeneous mixture is same.

14. **Assertion (A):** The gases nitrogen and oxygen together make 90% (by volume) of air.
Reason (R): Air contains some dust particles.

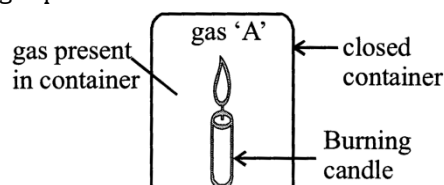
15. **Assertion (A):** Oxygen helps in burning of substances.
Reason (R): Burning of substances is a combustion process.

16. **Assertion (A) =:** Atmosphere is essential for life on earth.
Reason (R): Carbon dioxide is a colourless, odourless gas present in air.

17. **Assertion (A):** Aquatic animals use dissolved air (or oxygen) in water for respiration.
Reason (R): When fuel is burnt, a smoke is produced.

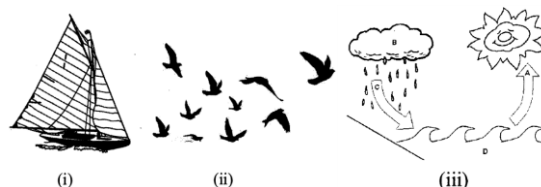
Figure Based Questions

18. The gas produced in the closed container is



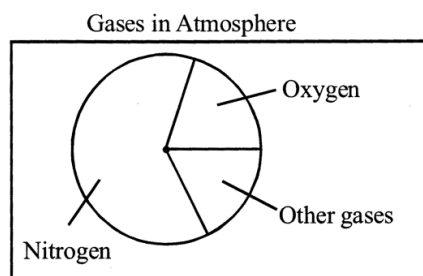
- (a) air (b) oxygen
 (c) nitrogen (d) carbon dioxide

19. Which of these show the uses of air?



- (a) (i) only (b) (ii) only
 (c) (i), (ii) and (iii) (d) (i) and (ii) only

- 20.



Which of the following statement is correct?

- (a) $\frac{2}{3}$ part is nitrogen and $\frac{1}{3}$ rd part is oxygen
 (b) $\frac{3}{4}$ part is oxygen and $\frac{1}{4}$ part is nitrogen

- (c) $\frac{1}{2}$ part is oxygen and $\frac{1}{2}$ part is nitrogen and other
- (d) $\frac{1}{5}$ part is oxygen and $\frac{4}{5}$ part is nitrogen and other gases.

Hints & Solutions

EXERCISE-1

Multiple Choice Questions

1. (c)
2. (d)
3. (d) Air is not a pure substance. A pure substance refers to an element or a compound and not a mixture. Air is a homogeneous mixture.
4. (b)
5. (c) Air is a matter and it is highly compressible.
6. (d)
7. (a)
8. (c)
9. (d) Aquatic animals use dissolved air (or oxygen) in water for their respiration.
10. (d)
11. (d)
12. (c)
13. (b)
14. (d)
15. (b) Plants consume lesser amount of oxygen during respiration and produce larger amount of oxygen during photosynthesis and R is correct.
16. (d)
17. (c)
18. (b) Carbon monoxide causes suffocation.
19. (c)
20. (a) It is about 79% by volume.
21. (a) In exhaled air the percentage of nitrogen is 79%.
22. (b)
23. (d)
24. (a)
25. (d)
26. (c)
27. (a)
28. (b)
29. (c)
30. (b)
31. (b)
32. (c)

2-Exercise

Match the Column

1. (a) $A \rightarrow (p); B \rightarrow (q); C \rightarrow (r); D \rightarrow (s)$
2. (b) $A \rightarrow (r); B \rightarrow (q); C \rightarrow (s); D \rightarrow (p)$
3. (b) $A \rightarrow (q); B \rightarrow (p); C \rightarrow (s); D \rightarrow (r)$

Passage Based Questions

4. (c)
5. (a) Air contains some dust particles which are solids.
6. (a) Air contains water vapours
7. (a)
8. (c)

9. (c)

10. (c)

11. (a)

12. (c)

Assertion/Reason Based Questions

13. (a)

14. (d) A is incorrect and R is correct.
[Percentage of nitrogen + oxygen = 99%].

15. (b)

16. (b)

17. (b)

Figure Based Questions

18. (d) Carbon dioxide is produced when candle burns.

19. (c)

20. (d)