

## Air Around Us

### Test

Time : 30 minutes

Maximum marks : 20

#### Instructions

- This test contains 20 questions.
- Each question has **FOUR** options (1), (2), (3) and (4). **ONLY ONE** of these four options are correct.
- For each question, marks will be awarded in one of the following categories:

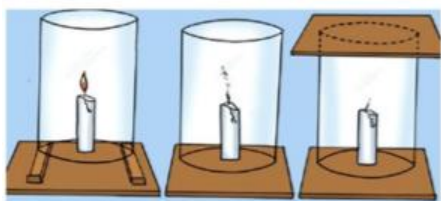
*Full Marks* : +1 : If only correct answer is given.

*Zero Marks* : 0 : If no answer is given.

*Negative Marks* : There is no negative marking.

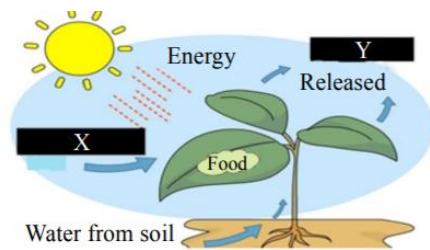
#### Multiple choice questions

1. Ranbeer wants to go on a mountaineering expedition. Along with woollen clothing and special shoes, he should take \_\_\_\_\_ with him.  
(1) Heater  
(2) Roller skate  
(3) Oxygen cylinder  
(4) All of these
2. From the given figure we conclude that



- (1) Air has mass.
- (2) Air is colourless.
- (3) Oxygen is needed for burning.
- (4) Nitrogen present in air in highest amount.

From the given diagram answer the following questions (Q.3 & 4).



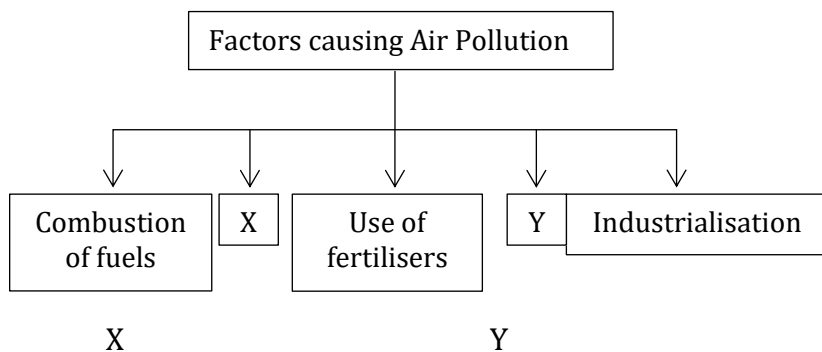
3. What are 'X' and 'Y' respectively?
 

(1) $\text{CO}_2$ and $\text{O}_2$	(2) $\text{O}_2$ and $\text{CO}_2$
(3) $\text{CO}$ and $\text{O}_2$	(4) $\text{N}_2$ and $\text{O}_2$
4. The above process by which plants prepare their own food is-
 

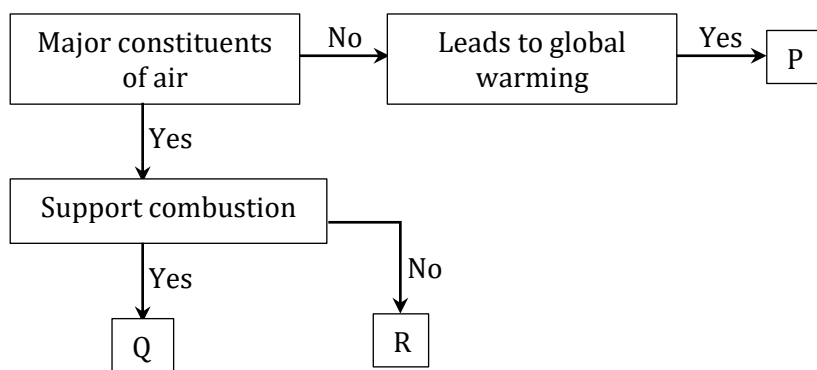
(1) Respiration	(2) Photosynthesis
(3) Transpiration	(4) Photolysis
5. Which of the following statements process/processes removes carbon dioxide from air?
 

(1) Respiration	(2) Condensation
(3) Photosynthesis	(4) Combustion
6. Find the incorrect statement.
  - (1)  $\text{CO}_2$  is used to extinguish the fire.
  - (2) Green plants need nitrogen gas to make food.
  - (3) Air contains dust particles.
  - (4) Smoke is always harmful.
7. Which of the following is not a property of oxygen?
  - (1) Essential for respiration
  - (2) Slightly soluble in water
  - (3) Supporter of combustion
  - (4) It has colour and sour in taste
8. **Statement I :** Water can dissolve oxygen.  
**Statement II :** Dissolved oxygen in water is needed by aquatic animals to make their food.  
 Read the above statements carefully and choose the correct option accordingly.
  - (1) Statement-I is correct but statement-II is incorrect.
  - (2) Statement-II is the correct, statement-I is incorrect.
  - (3) Both statements are incorrect.
  - (4) Both statements are correct.

9. Which of the following is not a effect of air pollution?
- (1) Climate change (2) Global warming  
(3) Acid rain (4) Earth quake
10. Who was the person who recognized oxygen as the gas responsible for combustion?
- (1) Kanad (2) Antoine Lavoisier  
(3) Albert Einstein (4) Newton
11. Following is a flowchart. Complete it with the correct option from the given below:



- (1) Deforestation Use of unleaded petrol  
(2) Reforestation Forest fire  
(3) Deforestation Forest fire  
(4) Use of vehicles Use of dust filters
12. What is the sum of the ratio of oxygen and nitrogen in the atmosphere?
- (1) 4 (2) 2 (3) 5 (4) 6
13. Which of the following is/are not a controlling method for air pollution?
- (1) By checking the emission of smoke from motor vehicles.  
(2) By checking or controlling the emission of smoke from factories.  
(3) Controlling the usage of fertilisers.  
(4) Deforestation.
14. Study the flow chart given.



Identify P, Q and R.

(1) P – O<sub>2</sub>, Q – CO<sub>2</sub>, R – N<sub>2</sub>

(2) P – O<sub>2</sub>, Q – N<sub>2</sub>, R – CO<sub>2</sub>

(3) P – CO<sub>2</sub>, Q – O<sub>2</sub>, R – N<sub>2</sub>

(4) P – N<sub>2</sub>, Q – O<sub>2</sub>, R – CO<sub>2</sub>

15. Match the column

Column-I		Column-II	
(A)	Nitrogen	(p)	Always harmful
(B)	Cleared after rainfall	(q)	Supporter of combustion
(C)	Smoke	(r)	Dust particles
(D)	Oxygen	(s)	Proteins

(1) A- r, B-s, C - p, D- q

(2) A- s, B-r, C - p, D- q

(3) A- r, B-q, C - p, D- s

(4) A- q, B-r, C - p, D- s

16. Which gas is needed by plants to make protein?

(1) Oxygen

(2) Carbon dioxide

(3) Nitrogen

(4) Helium

17. Match the column

Column-I		Column-II	
(A)	Air	(p)	Occupies space
(B)	Clothes dry	(q)	Moving air
(C)	Face mask	(r)	To stop the dust particles
(D)	Wind	(s)	Air holds water vapour

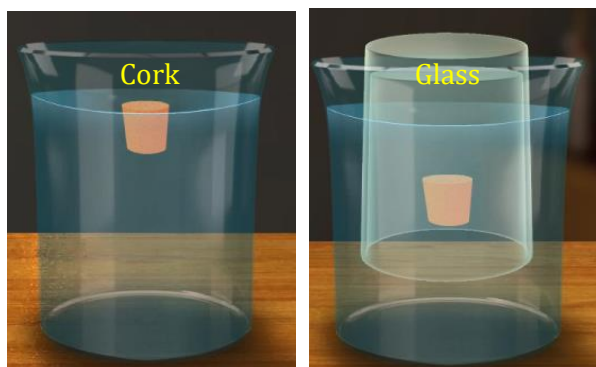
(1) A- r, B-s, C - p, D- q

(2) A- s, B-r, C - p, D- q

(3) A- p, B-s, C - r, D- q

(4) A- q, B-r, C - p, D- s

18. Which property of air is shown in the figure?



- (1) Air has mass
- (2) Air exert pressure
- (3) Air occupies space
- (4) Air is dissolved in water

**19.** Air is not a single compound, but it is a mixture because

- (1) It shows the property of only element.
- (2) It shows the property of average sum of all its constituents.
- (3) Its constituents are chemically combined.
- (4) All of these

**20.** Which of the following is not a use of air?

- (1) Dispersal of seeds
- (2) Movement of yachts
- (3) Floating of paper on water
- (4) Windmill

## Test solutions

## Answer key

Question	1	2	3	4	5	6	7	8	9	10
Answer	3	3	1	2	3	2	4	1	4	2
Question	11	12	13	14	15	16	17	18	19	20
Answer	3	3	4	3	2	3	3	2	2	3

## 1. Option (3)

In mountaineering expedition, one needs oxygen cylinder as on high mountains, pressure of gas is very low.

## 2. Option (3)

Oxygen is necessary for burning. It is a supporter gas for combustion.

## 3. Option (1)

In photosynthesis process plants react with carbon dioxide and water, forms their food with release of oxygen gas.

## 4. Option (2)

In photosynthesis process plants react with carbon dioxide and water, forms their food with release of oxygen gas.

## 5. Option (3)

Plants use  $\text{CO}_2$  present in the air to make their own food by a process called photosynthesis.

## 6. Option (2)

Green plants need  $\text{CO}_2$  gas to make food.

## 7. Option (4)

Oxygen is colourless, tasteless and odourless gas.

## 8. Option (1)

Dissolved oxygen in water is needed by aquatic animals to breathe.

## 9. Option (4)

Earthquake is not a effect of air pollution.

## 10. Option (2)

Antoine Lavoisier was the person who recognized oxygen as the gas responsible for combustion.

## 11. Option (3)

When air contains harmful or undesirable substances, it is said to be polluted air. Deforestation and forest fire causes air pollution.

## 12. Option (3)

Ratio of nitrogen (80%) and oxygen (20%) = 4 : 1.

Sum of the ratio = 4 + 1 = 5

**13. Option (4)**

Deforestation is not a controlling method for air pollution.

**14. Option (3)**

CO<sub>2</sub> gas leads to global warming, O<sub>2</sub> gas is a supporter of combustion while nitrogen gas does not support combustion.

**15. Option (2)**

Nitrogen makes proteins, dust particles are cleared after rain fall, smoke is harmful, oxygen gas is supporter of combustion.

**16. Option (3)**

Nitrogen gas is needed by plants to make protein.

**17. Option (3)**

Air occupies space, clothes dry because air holds water vapour, face mask stops the dust particles in entering them in our nose and mouth, wind is moving air.

**18. Option (2)**

The air in the glass exerts pressure and pushes down the cork, this shows that air exerts pressure.

**19. Option (2)**

Air is a mixture because it shows the property of average sum of all its constituents.

**20. Option (3)**

Floating of paper on water is not a use of Air.