



CHEMISTRY

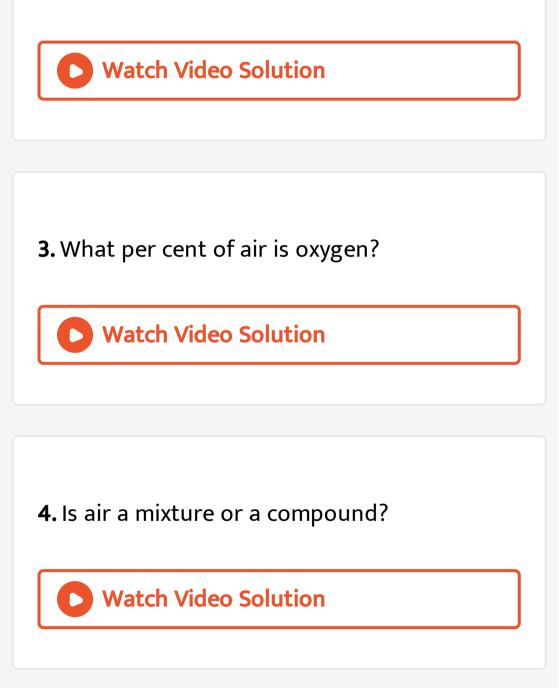
BOOKS - ICSE

AIR AND ATMOSPHERE

Check Your Progress Answer These Questions

1. Name the main components of air.

2. Which is the most abundant gas in air?



5. What happens when carbon dioxide is passed through lime water?
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Exercises Tick The Most Appropriate Answer

1. Which of the following is the major constituent of air?

A. oxygen

B. nitrogen

C. carbon dioxide

D. none of these

Answer:

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2. What per cent of air is oxygen?

A. 21

B. 38

C. 78

D. variable

Answer:



3. Which of the following supports combustion?

A. carbon dioxide

B. nitrogen

C. argon

D. oxygen

Answer:



4. Which of the following is necessary for

photosynthesis?

A. carbon dioxide

B. methane

C. nitrogen

D. oxygen

Answer:



5. Which of the following determines climatic

conditions?

A. oxygen

B. nitrogen

C. carbon dioxide

D. water vapour

Answer:



6. Which of the following is an inert gas?

A. argon

B. oxygen

C. hydrogen

D. none of these

Answer:

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7. Which metal rusts?

A. gold

B. silver

C. iron

D. aluminium



Exercises Fill In The Blanks

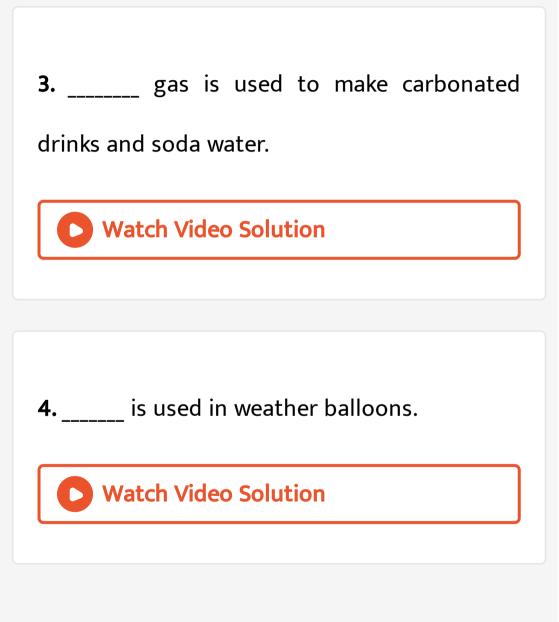
1. ____ controls the rate of burning.

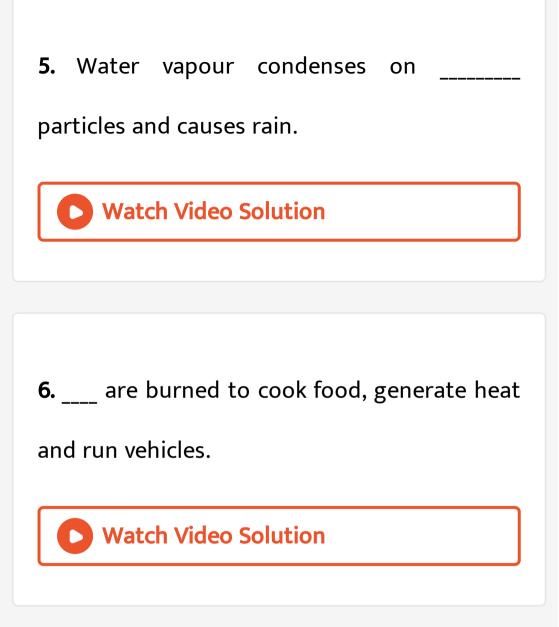
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2.____ gas is necessary for respiration.









7. The blanket of air that surrounds the earth
is called the
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8. acts as the medium through which
sound travels.
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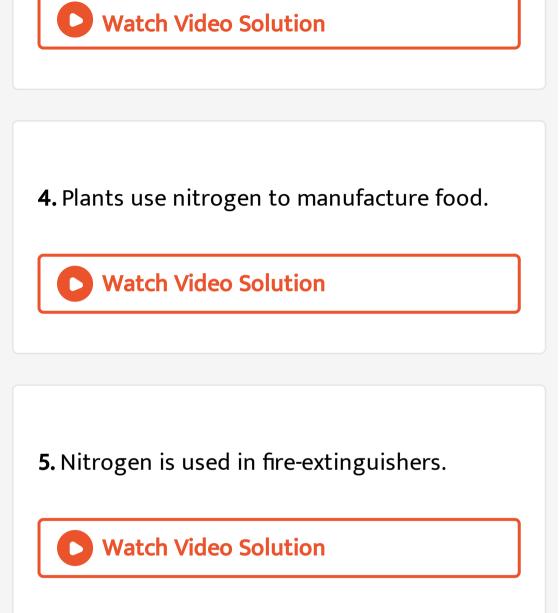
Exercises Write True Or False Correct The False Statements Atmospheric nitrogen gets converted to nitrates in the soil.
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2. The percentage by volume of oxygen in air is

variable from place to place.



3. Burning and respiration require oxygen.



6. Excess water vapour increases the rate of evaporation.

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7. Argon is used in advertisement signs and brake lights.



8. Photosynthesis is the only natural process

that releases oxygen into the air.

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Exercises Matching

1. Match the columns

Match the columns.

- 1. Oxygen
- 2. Nitrogen
- 3. Carbon dioxide
- 4. Water vapour
- 5. Rust

- a. needed for photosynthesis
- supports combustion
- hydrated iron oxide
- d. helps in protein synthesis
- determines climatic conditions
- burns to produce energy



Exercises Answer The Following In Short

1. Write down the composition of air in per

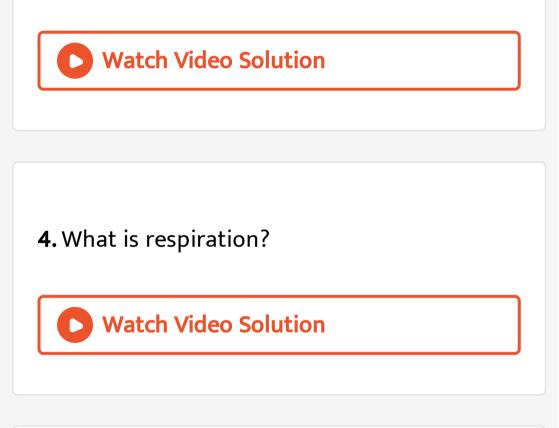
cent by volume.

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2. Why is nitrogen essential for plants?

3. In the manufacture of ammonia ,I] Name

the process ii] State the ratio of the reactants



5. What are the uses of krypton and xenon?

6. What is the importance of dust particles in

air?



7. Name the processes that consume oxygen

from the air.

8. What is rusting ? State the conditions required for rusting.

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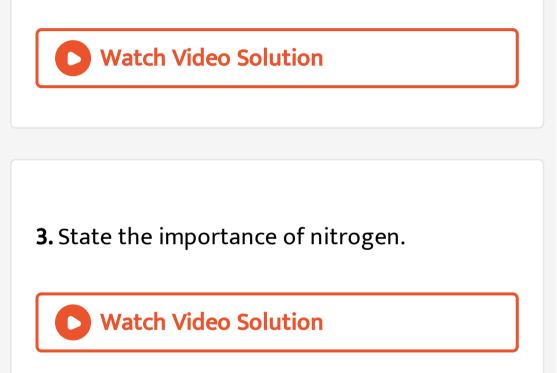
Exercises Answer The Following In Detail

1. Describe an experiment to show that air is

necessary for burning.

2. How will you show by an experiment that air

contains carbon dioxide?



4. State the importance of oxygen and carbon

dioxide.





5. Describe the importance of water vapour in

air.



6. List any five points to describe the

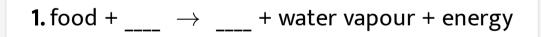
importance of the atmosphere.

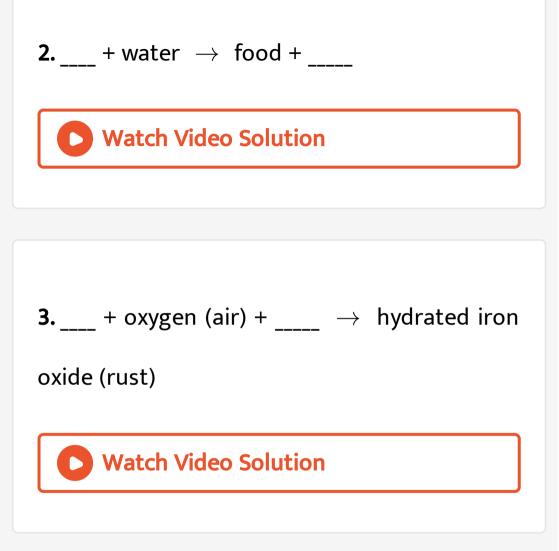
7. State the causes of increase of carbon

dioxide in air.



Exercises Complete These Chemical Processes Also Name These Processes





Think And Answer

1. Things will burn more readily in pure oxygen

than in air. Do you agree? Explain.



2. Animals depend on plants for respiration.

How?

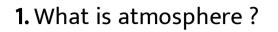


3. Drops of water are seen on the outer surface of a vessel containing chilled water. Give reason.



4. Planting more trees can reduce carbon dioxide in air. Do you agree? Explain.







2. Why can't we see air ?

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3. What is wind ?

4. What would have happened if there would

have been no atmosphere around the earth ?



5. What is air called a mixture ? Give five facts

in supports of your answer.

6. What are the main components of air ? Write down the composition of three main gases present in air by volume.



7. What do you observe when

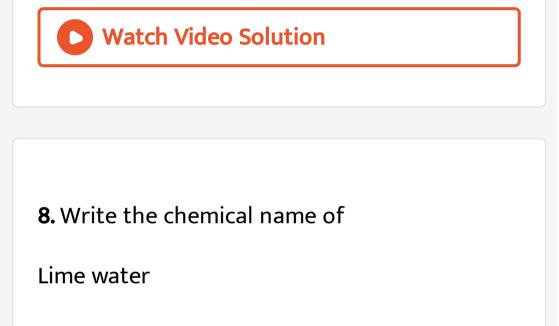
(a) Ice cold water is filled in a glass tumbler.

(b) A burning candle is covered with an inverted jar.

(c) Carbon dioxide gas is passed through lime

water.

(d) A beam of light is allowed to enter in a closed dark room through a small hole.



9. Write the chemical name of

The white insoluble solid formed on reaction

of carbon dioxide with lime water.



Exercise li

1. Name two important processes supported

by oxygen present in air .



2. Give two uses of the following components

present in air :

(a) oxygen (b) nitrogen

(c) carbon dioxide (d) water vapour

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3. Define the following :

(a) Respiration, (b) Photosynthesis,

(c) Combustion.

4. What are fuels ? Give two examples of

modern fuels.

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5. Give reasons :

Aquatic animals and plants are able to survive

in water.

6. Give reasons :

A burning candle stops burning if covered

with a glass tumbler.



7. Give reasons : Mountaineers carry oxygen

cylinders with them.



8. Give reasons :

When water is heated, we see bubbles rising

up.



9. Name the processes which maintain the

balance between oxygen and carbon dioxide in

the air How is it done ?

10. State two similarities and two differences

between respiration and burning.



11. Define rusting. What are the two necessary conditions for rusting of iron ? Give the chemical name of rust.

12. How is air useful to :

(a) water boats (b) agriculture

(c) windmills (d) scooters and cars.

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13. State the full form of LPG and CNG ? How

are the two different in their composition ?



14. Why is nitrogen important to all living beings ?

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15. Nitrogen fixation is

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Exercise lii

1. What is air pollution ? What are the harmful effects of sulphur dioxide , nitrogen dioxide and hydrogen sulphide present in the air ?



2. Mention five causes of air pollution.



3. Name two air pollutants which

(a) affect our health, (b) cause acid rain,

(c) cause global warming

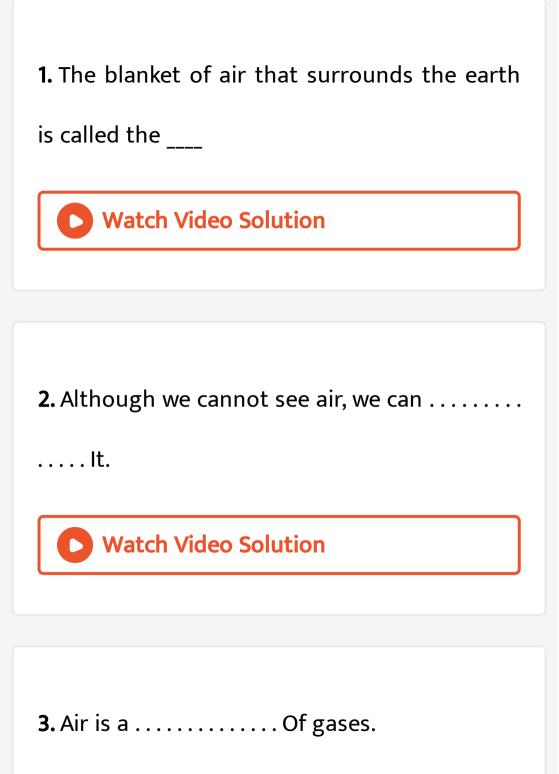


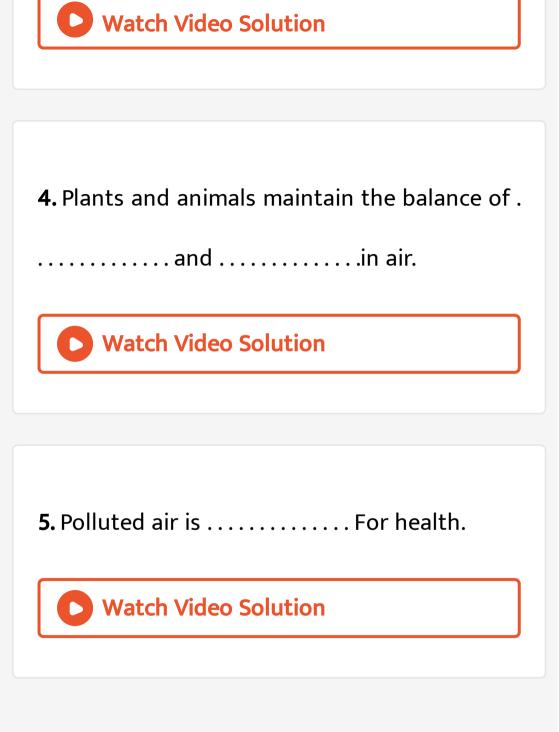
4. What is meant by ozone depletion ?



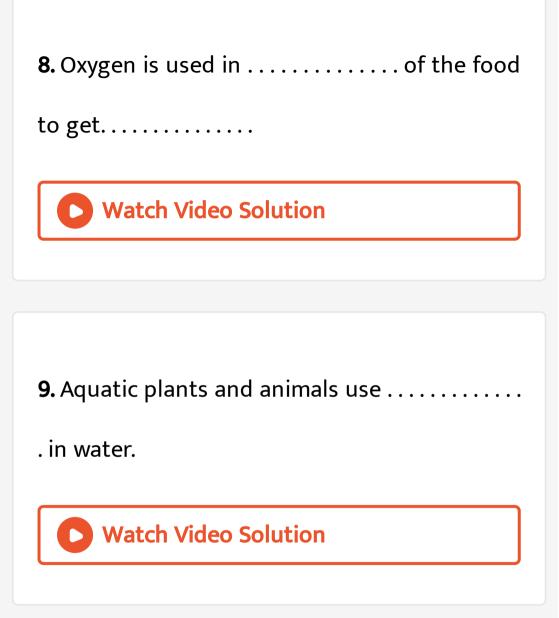
5. State four steps to be taken to control air pollution. Watch Video Solution **6.** Name three green house gases. Watch Video Solution

Objective Type Questions Fill In The Blanks





6. The supporter of combustion in air is
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7. Green plants need to prepare food.
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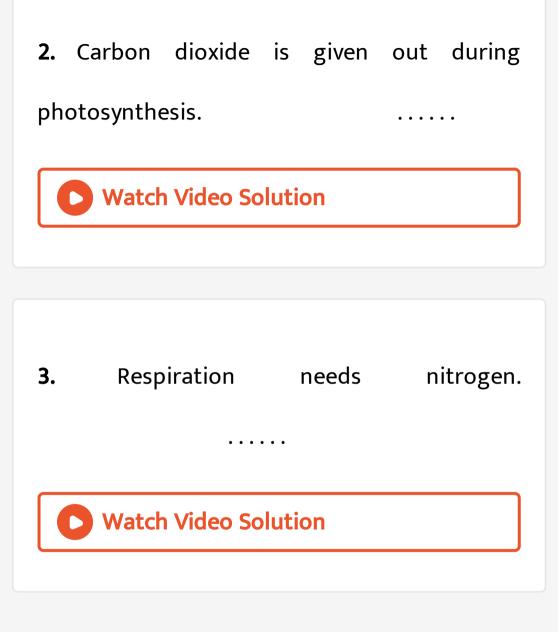
10. The reddish brown powder on the surface of iron nails exposed to air and miosture is called

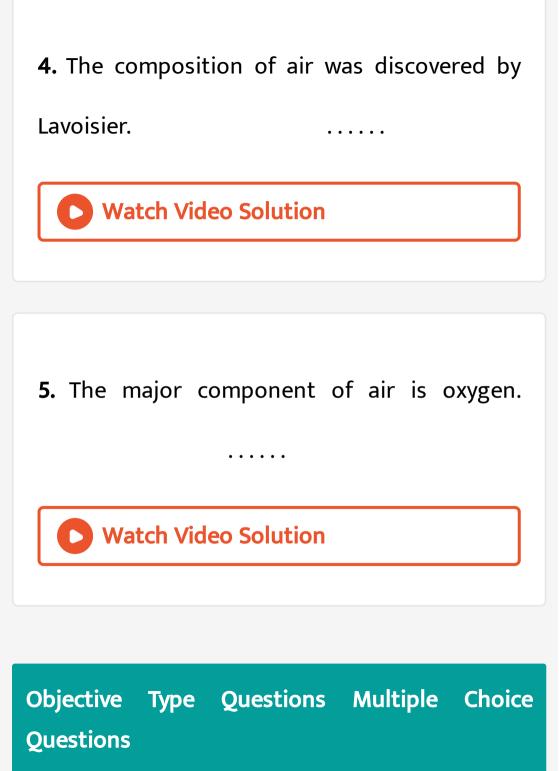


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Objective Type Questions Write True Or False For The Following

1. Air is a compound.





1. Air consists of

A. only oxygen

B. only nitrogen

C. only carbon dioxide

D. all of these

Answer:

2. Air pollution is due to the

A. cutting of green plants

B. gases like carbon monoxide, sulphur

dioxide etc.

- C. smoke given out by factories
- D. all of the above.

Answer:

3. The gases which cause acid rain are

A. sulphur dioxide and oxygen

- B. nitrogen and oxygen
- C. carbon dioxide and water vapour
- D. nitrogen dioxide and sulphur dioxide.

Answer:



4. Rust is

A. hydrated iron oxide

B. hydrated copper sulphate

C. anhydrous iron oxide

D. none of the above

Answer:

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5. Photosynthese is process in which plants

A. take in oxygen and give out carbondioxideB. take in carbon dioxide and give out

oxygen

C. take in nitrogen abd give out oxygen.

D. none of the above

Answer:

6. Fuels which do not leave any residue on burning are

A. coal and wood

B. coal and LPG

C. wood and CNG

D. LPG and CNG.

Answer:

7. Respiration is

A. is a slow process

B. is a natural and continuous process

C. takes place at body temperature

D. all of the above.

Answer:

8. Which of the following is common in

combustion and respiration

A. oxygen

B. release of heat and light

C. natural process

D. nitrogen.

Answer:

9. Which of the following is not a green house

gas ?

A. carbon dioxide

B. sulphur dioxide

C. methane

D. nitrous oxide

Answer: