

AIR

AND

ATMOSPHERE

EXERCISE - I



1. The earth is surrounded by a thick layer of air called the atmosphere that extends upto a height of about 320 km above the surface of earth.
2. We can't see air because it is colourless, odourless, tasteless, transparent and gaseous matter.
3. The fast moving air the blow of air is called wind.
4. If there would be no atmosphere.

► We could be burnt or
frozen

► The earth would get very
hot during the day
and very cold at night
that we would not be able
to survive.

► Atmosphere protects us from
harmful rays from the
sun.

5. Air is called a mixture
because:

► Air has no formula, a mixture

has no formula whereas compound has a formula.

▶ No energy changes are involved to form air or from various gases -

▶ When air is formed out of its constituents no change in mass and no change in volume takes place.

▶ Properties of air vary from place to place and time to time. i.e. there is more CO_2 in towns as compared

to villages where more oxygen prevails as compared to towns.

► Components of air can be separated by physical methods.

6. Main components of air are:

i) Nitrogen

ii) Oxygen

Composition of air by volume



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

Ans → We will observe that fine water droplets get deposited

GASES

PERCENTAGE

Nitrogen

78%

Oxygen

21%

Carbon dioxide

0.03% - 0.04%

Inert gases

0.9%

Water vapour

Varies

Dust particles

Varies

Other substances

Varies

on the ~~out~~ outer wall of the glass tumbler.

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

Ans → The candle burns more brightly because candle gets oxygen support in burning.

c) Carbon dioxide gas is passed through lime water.

Ans → When CO_2 gas is passed through lime water it forms calcium carbonate which is white precipitate. This gives

the milky white appearance to the solution.

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

Ans \rightarrow We will observe randomly moving dust particles in the air.

8. a) lime water

Ans \rightarrow Calcium hydroxide - $\text{Ca}(\text{OH})_2$

b) The white, insoluble solid formed on reaction of carbon dioxide with ~~lime~~ lime water.

Ans → Calcium Carbonate - CaCO_3