Class- 6th

Subject- chemistry

chapter- 5th (Air and atmosphere)

Choose the correct option:

a. how can we release some of the air from the glass shown in the given diagram: tilt the glass.
b. the air over Industrial cities has actually higher amount of one of the following components then normal air. this component is: Carbon dioxide.
c. About one fifth of ordinary air is: oxygen.
d. The component of air which is utilised by the plant in respiration is : oxygen.
e. In an activity to show that air is mainly a mixture of 2 gases (nitrogen and oxygen) the carbon dioxide produced by the burning of candle in air is absorbed by dissolving the substance X in water in the trough. The substance x is: Caustic soda.
f. Which of the following air pollutant reduce the oxygen carrying capacity of blood to a large extent: Carbon monoxide.
g. The constitute of polluted air which contribute in producing acid rain: sulphur dioxide.
h. Which of the following is not an air pollutant : sewage.
i. Which of the following will reach the earth in greater amounts If the amount of chlorofluorocarbon released into the air increases: Ultraviolet Rays.
j. Which of the following is caused by global warming : all of these.
k. Examples of suspended particulate matter are :all of these.
l. Which of the following is used for preventing rusting of iron : all of these.

Fill in the blanks:

a. Carbon dioxide gas extinguishes a burning fire.
b. The component of air used by green plant to make their food is carbon dioxide.
c. The suspended particles can be seen moving in a beam of sunlight in a darkroom.
d. Aquatic animals use dissolved oxygen in water for respiration.
e. Air helps in the dispersal of seeds and pollen of flowers of several plants.
f. sulphur dioxide gas in the polluted air cause acid rain.
g. Smoke consists of fine carbon particles and some gases.
h. Oxygen gas is required for burning.
i. Moving air is called wind.
j. People climbing high mountain carry cylinder containing oxygen gas in them.

Write true and false:

a. As we go higher up in the atmosphere the amount of air becomes less. True
b. Oxygen is the major component of the air. False
c. The composition of air is always the same at every place. False
d. Water vapours condense to form cloud. true

e. Breathing in air containing smoke damage our health. True
f. Blowing air is used to turn the blade of windmills. True
g. Burning of fuels use carbon dioxide and release oxygen. False
h. Carbon monoxide is the main reason of global warming. False

Give 2 examples:

a. Conditions necessary for rusting. oxygen and water.
b. effects of global warming. rising in temperature and melting of glacier.
c. Major Components of air. nitrogen and oxygen.
d. Inert gases. helium and argon.
e. Source of water vapour in air. transpiration and evaporation.

Match the following:

a. damaging ozone layer. Chlorofluorocarbon.
b. Produce acid rain , sulphur dioxide.
c. leads the global warming , carbon dioxide.
d. Inert gas present in the air, argon.
e. Reduce the oxygen carrying capacity of blood, word carbon monoxide.

Answer the following questions in short

1. Name the component of air which condense on the cold surface to form drops of a liquid. what is this liquid?

   Ans. water vapour is the component of air which condense on the cold surface to form water.

2. Explain why a burning candle stops burning after sometime when covered with an inverted gas jar?
   Ans. Because of the absence of oxygen a burning candle stop burning after sometime when covered with an inverted gas jar.
3. Why do deep sea driver carry oxygen cylinders with them?
   Ans. Because there is no free oxygen in the deep sea.
4. State the importance of carbon dioxide for living things?
   Ans. Carbon dioxide is important for living plants for photosynthesis.
5. What is the importance of water vapour in air?
   Ans. Water vapour forms cloud after condensation.
6. What is smoke? How a smoke produced? explain why tall chimneys are installed in factories?
   Ans. Smoke consists of fine carbon particle and some gases. smoke is produced by the burning of fuel like wood, coal, kerosene, petrol and diesel.

Tall chimneys in factories are installed to take the smoke produced in the factories high up in the air so as to reduce its harmful effect on the ground.

7. Why do plants need nitrogen?
   Ans. The plants use nitrogen gas of the to make proteins. These proteins are used by the plants for their growth.
8. State any 5 uses of air?
   Ans. a. Air is used by living beings for breathing.
   b.air is used for burning fuels.
   c. Air helps in the dispersal of seeds and pollen of Flowers of several plants.
   d. Air helps in the movement of aeroplanes.
   e. Air plays an important role in the water cycle in nature.
   9. What is wind. state 3 uses of windmill.
   Ans. Blowing air is called wind. The windmills are used to draw water by running pumps to run flour Mills and to generate electricity. wingd is used to turn the blades of windmill for this work.
   10.What is greenhouse effect. state its importance for us?
   Ans. The warming up earth's surface due to the trapping of sun's heat Rays by carbon dioxide gas in the atmosphere is called greenhouse effect. By the greenhouse effect the earth Has become a habitable planet having millions of different life forms on it.
   11. What deplete the ozone layer in the atmosphere. what are the harmful effects of the depletion of ozone layer on us.
   Ans. Chlorofluorocarbon gas is responsible for the depletion of ozone layer in the atmosphere. Due to the depletion of ozone layer UV radiation from sun directly come on the earth surface which is responsible for the skin cancer in human beings.

Answer the following questions in detail:

1. What is air. state the composition of air. write any 2 properties of air.
   Ans. Air is a mixture of several gas. Nitrogen, oxygen, carbon dioxide, water vapour other gases and dust particles are the composition of air. Air is Colorless, tasteless and air has mass.
2. How do plants and animals maintain the balance of oxygen and carbon dioxide gases in air?
   Ans. Animals and plants Consume oxygen and release carbon dioxide gas in the atmosphere by the process of respiration. green plants need carbon dioxide gas to Make their food by the process of photosynthesis. in the process of photosynthesis green plants produce oxygen and release in the atmosphere, this is how animals and plants maintain the balance of oxygen and carbon dioxide in the atmosphere.
3. What is atmosphere? Why is atmosphere essential for life on earth? Why do Mountaineers carry oxygen cylinders with them while claiming high mountains?
   Ans. The envelope of air that surrounds the earth is called atmosphere. atmosphere is essential for life on earth, this is because of air of atmosphere provides oxygen gas for breathing by all the living beings including us. At high altitude of mountains, the air is very thin. So, the air at high altitudes contains very little oxygen due to which it

becomes difficult to breathe properly. So The Mountaineers use the oxygen gas cylinders.

4. Name one source and one harmful effect of each of the following air pollutants;
   Ans. A. Sulphur dioxide: Sulphur dioxide is produced by the burning of fuels. Sulphur dioxide gas in the polluted air cause respiratory problems and also responsible for acid rain.
   b. Nitrogen oxide: Nitrogen oxide are produced by the burning of fuels. nitrogen oxide attack breathing system and lead to lung congestion.
   c. Carbon monoxide: Carbon monoxide is produced by the incomplete combustion of fuels like wood coal kerosene. Carbon monoxide is responsible for the reduction of oxygen carrying capacity in the blood.
   d. Chlorofluorocarbons: Chlorofluorocarbons are the chemical compounds made of fluorine chlorine and carbon elements. Chlorofluorocarbon is responsible for the ozone hole.
   5. What is air pollution. what are the main source of air pollution?
   Ans. The contamination of air with harmful gases, smoke and dust is called air pollution. The major pollutants which causes air pollution are sulphur dioxide, nitrogen oxide, carbon monoxide, excess of carbon dioxide, chlorofluorocarbons and suspended particulate matter such as dust, smoke and fly ash.
   6. What is global warming? What are the likely harmful effects of global warming?
   Ans. the rise in the temperature of earth's atmosphere due to excessive greenhouse effect produced by increasing amount of carbon dioxide gas in the atmosphere, is called global warming.
   Effects of global warming:

a. The rise in temperature of atmosphere will melt the glacier on the poles of the earth. the huge amount of water produced by the melting of polar ice will rise the level of water in sea and oceans, and flood the low lying areas of the earth.
b. Global warming can reduce rainfall in some areas of the earth leading the drought.

End.