WORKSHEET 1/3

Class - IX Subject - Science

Chapter 14 – Natural Resources

Q1. How is our atmosphere different from the atmosphere on Venus and Mars?

Answer: The atmosphere of Earth contains a mixture of many gases like nitrogen (78.08%), oxygen (20.95%), carbon dioxide (0.03%) and water vapour (in varying proportion). On the other hand, the atmosphere on Venus and Mars mainly contains carbon dioxide, i.e., about 95-97%. It may be the reason that due to this, no life is known to exist in both Venus and Mars.

Q2. How does the atmosphere act as a blanket?

Answer: The atmosphere mainly contains air which is a bad conductor of heat. Due to this, the atmosphere keeps the average temperature of the Earth fairly balanced during the day and eventhroughout the year. The atmosphere prevents the sudden increase in temperature during the daylight hours and during the night; it slows down the escape of heat into the outer space. In this way, atmosphere acts as a blanket.

Q3. What causes winds?

Answer: Winds occur due to unequal heating of atmospheric air. The heat causes rising up ofair along with water vapour.

Q4. How are clouds formed?

Answer: Water evaporates from water bodies and goes into the atmosphere. Air also becomeshot due to sunlight and starts rising up taking along with water vapour. As the air rises up, it expands and cools. This cooling of air causes water vapour in the air to condense. The process of condensation of water occurs, if some particles (like dust) act as the ‘nucleus’ for these drops to form around. None these small droplets grow and become big by more and more

condensation of other droplets of water. These steps form the clouds.

Q5. List any three human activities that you think would lead to air pollution.

Answer: The following activities lead to air pollution:

(i) Excessive burning of fossil fuels, i.e., coal and petroleum produces high amount of oxides of nitrogen and sulphur. These oxides mix with air and cause acid rain leading to many harmful effects.

(ii) Many industries release high amount of poisonous gases into the atmosphere causing air pollution.

(iii) Forest fires, excessive use of chlorofluorocarbons (CFCs) used in refrigerators, excessive mining and ore refining release harmful gases into the air leading to pollution.

Q6. Why is the atmosphere essential for life?

Answer: Atmosphere is important for life due to following reasons:

(i) It keeps the average temperature of the Earth steady during the day and even throughout the year.

(ii) It prevents the sudden increases in temperature during the daylight hours.

(iii) The gases it contains are required for sustaining life on Earth.

These gases are:

(a) Oxygen which is required for respiration by all living organisms.

(b) Carbon dioxide is used in photosynthesis by plants to synthesize food.

(c) Nitrogen provides inert atmosphere and an important component of proteins.

(iv) A thick layer of ozone (in stratosphere) of atmosphere, filters the harmful UV radiations reaching the Earth. The UV rays produce harmful effects on all living organisms.

1. Hot air is _____than cold air.

2. Green plants convert carbon dioxide into glucose in the presence of _____.

3. The life-supporting zone of the Earth where the atmosphere, the hydrosphere and the lithosphere interact and make life possible is known as the _____.

4. The space among the soil particles are filled with _____.

5. Dead remains of plants and animals is called _____.

6. Water covers _____% of the Earth's surface.

7. On planets like Venus and Mars the major component of the atmosphere is _____.

8. The fossil fuels like coal and petroleum contain small amounts of _____ and_____ which are primarily responsible for acid rain.

9. The substances that cause pollution are called _____.

10. _____ is the region of atmosphere where ozone layer is present.

11. The atmosphere of the earth is heated by radiations which are mainly

(a) Radiated by the sun (b) Re-radiated by land

(c) Re-radiated by water (d) Re-radiated by land and water

12. If there were no atmosphere around the earth, the temperature of the earth will

(a) Increase (b) Go on decreasing

(c) increase during day and decrease during night (d) Be unaffected

13. What is lithosphere?

14. What is hydrosphere?

15. What is atmosphere?

16. What is biosphere?

17. What causes winds?

18. Which gets heated faster land or water?

19. Define air-pollution?

20. List any three human activities that you think would lead to air pollution.

21. Name two diseases caused due to an increased content of pollutants in the air produced dueto the burning of fossil fuels.

22.What are the types of natural resources?

23. How do fossil fuel cause air pollution?

24. Tina saw reduction in greenish layer of lichens at the bark of trees at the biology garden of the school. The garden was few metres away from diesel generator placed for electricity backup. She immediately informed the school authorities to check the pollution level of diesel and kerosene used in the generator.

(a) How reduction in Lichens layer isrelated to pollution?

(b) What measures should be taken by school authorities to check the reduction?

(c) What qualities are shown by Tina by informing school about the Lichens?

25. Acid rain and smog are said to be the consequences of air pollution. How are they caused? What are the ill effects of breathing polluted air on human health?