IMSG(I-VIII) G-6/2

Grade Five - General Science

Chapter Test

Student Name		Roll No	
Paper Time	00 minutes	Date	
Total Marks	255	Obtained Marks	

Q.1: Choose the correct answer from given options.

Marks 44

1-Which system controls the activities of the body?

A: nervous system | B: digestive system | C: skeletal system | D: muscular system

2-Which system enables the movement in the body?

A: muscular system | B: nervous system | C: respiratory system | D: digestive system

3-The respiratory system consists of the lungs, the trachea and the:

A: liver | B: diaphragm | C: pancreas | D: esophagus

4-When you breathe in air, you bring oxygen into your lungs and give out:

A: oxygen | B: hydrogen | C: carbon monoxide | D: carbon dioxide

5-When you inhale your lungs will:

A: expand | B: become hard | C: contract | D: become spongy

6-The trachea is also called the

A: lung | B: diaphragm | C: wind pipe | D: air passage way

7-How many chambers does the human heart have?

A: two | B: three | C: four | D: five

8-The movement of blood through the human heart and body is called:

A: circulation | B: locomotion | C: ventilation | D: heart pump

9-Which type of blood vessels carries blood away from the heart?

A: veins | B: arteries | C: capillaries | D: arteries and veins

10-If you have flu, what will you do to keep others safe from infection?

A: will exercise | B: will sleep for more time | C: will sit in the sun | D: will wear mask

11-Which one of the following causes polio?

A: bacteria | B: virus | C: house fly | D: mosquito

12-Mainly protection against infectious diseases is done by:

A: wearing mask, washing hand, vaccination | B: wearing mask, washing hand, sunbathing | C: washing hands, sunbathing, sleeping more | D: vaccination, washing hand, staying indoors

13-To which group of microorganisms do mushrooms belong?

A: virus | B: fungi | C: bacteria | D: protozoa

14-Penicillium is an example of which group?

A: protozoa | B: fungi | C: bacteria | D: virus

15-Which one of the following contaminates food?

A: moisture | B: microorganisms | C: air | D: heat

16-Which one of the following is not a microorganism?

A: bacteria | B: virus | C: protozoa | D: ant

17-What is the one way that bacteria can be helpful?

A: they lived on spoiled food | B: they can make us sick | C: they help to break down dead leaves, in soil | D: they like to eat sweet foods

18-Microorganisms can be found

A: in water | B: in air | C: all around us | D: in animals

19-Microorganisms also help in production of food like

A: bread | B: fruits and seed | C: vegetables | D: pulses

20-What is an ecosystem?

A: system of non-living things is an environment. | B: area having a group of living and dead things. | C: system of living things in an environment. | D: the collection of living and nonliving components in an area.

21-Food chain:

A: begins with producer | B: begins with consumer | C: begins with decomposer | D: ends with producer

22-For the conservation of ecosystem:

A: forests are being cut | B: roads are being built | C: tree plantation is being done | D: factories are being installed

23-If insecticides are used for controlling the population of insects, the population of birds will:

A: increase | B: decrease | C: decrease first then will increase later | D: increase first, then will decrease later

24-Which part of the food chain only eats meat?

A: herbivore | B: carnivore | C: producer | D: decomposer

25-What is the habitat of a polar bear?

A: north pole | B: ocean | C: mountain | D: forest

26-What is the living part of an ecosystem called?

A: producer | B: country | C: factory | D: community

27-What are the consumers that eat only plants called?

A: carnivores | B: herbivores | C: omnivores | D: decomposers

28-Which of the following is a decomposer?

A: bacteria and fungi | B: bacteria and amoeba | C: fungi and paramecium | D: snail and earthworm

29-What does every food chain begin with?

A: decomposer | B: air | C: producer | D: nutrients

30-The change of milk into yogurt is

A: physical change | B: evaporation | C: chemical change | D: change of order

31-Why are iron gates painted 1. To save it from rusting 2. To save it from sunlight 3. To make it beautiful 4. To save it from water Out of these which answer is correct?

A: 1 and 2 | B: 1 and 3 | C: 2 and 3 | D: 1 and 4

32-Which one is NOT a chemical change?

A: Seed germination | B: Making paper boat | C: Burning of wood | D: Cooking food

33-What type of change is it when metal expands on heating?

A: permanent | B: chemical | C: physical | D: irreversible

34-Which among of the following is a physical change?

A: cutting of wood in small pieces | B: burning of wood | C: ripening of fruit | D: cooking of fruit

35-Which of the following is a reversible change?

A: melting of ice | B: germination of seed | C: burning of a matchstick | D: none of these

36-Rusting occurs when iron is exposed to:

A: oxygen and water | B: soil and rain | C: soil and sunlight | D: salt water and darkness

37-Rusting of iron is a chemical change because:

A: it is temporary | B: it can be cleaned and the original substance is recovered | C: a new substance is not formed | D: a new substance is formed

38-Blooming of flower is a

A: chemical change | B: physical change | C: rusting | D: both B and C

39-The change of water into water vapour is called:

A: evaporation | B: condensation | C: melting | D: freezing

40-Which of the following is a luminous object?

A: the moon | B: a light bulb | C: a pencil | D: a book

41-Which of the following objects would be the best to use to make a shadow?

A: translucent object | B: transparent object | C: opaque object | D: clear object

42-Speed of sound is maximum in:

A: a metal wire | B: air | C: water | D: vacuum

43-Which of the following sounds is called noise?

A: sound of a flute | B: rustling of leaves | C: pressure horn sound | D: chirping of birds

44-When water comes in the way of sound travelling through air:

A: sound will stop | B: sound will slow down | C: sound will become fast | D: it has no effect on the speed of sound

Q.2: Provide a constructed response.

Marks 36

1-Why is breathing so important?

Answer: Breathing is essential because it allows the respiratory system to exchange gases between the body and the external environment. When we breathe in, we take in oxygen which

is then transported by the circulatory system to all the cells in the body. Cellular respiration uses this oxygen to release energy from food. During this process, carbon dioxide is produced as a waste product which is transported back to the lungs by the circulatory system and exhaled out of the body. This continuous process is vital for life processes.

2-What do animals need from air?

Answer: Animals need oxygen from the air for respiration, a process that releases energy stored in food to power cellular activities.

3-What is contained in exhaled air?

Answer: Air that is exhaled from the lungs carbon dioxide, which is a waste product of cellular respiration.

4-The soil of forests in a hot climate is always hot and moist, whereas the soil of forests in a cold climate is cold and dry. Out of these two areas where the decomposition of fallen leaves will take place faster? Explain.

Answer: The decomposition of fallen leaves will take place faster in the soil of forests in a hot climate because it is hot and moist. The rate of decomposition increases with increase in temperature, humidity and oxygen. These conditions favor the activity of bacteria and fungi, which are important decomposers.

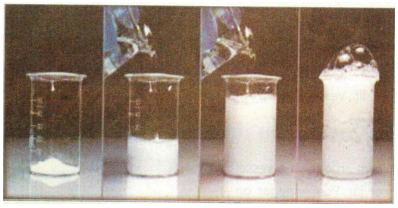
5-Why has the Govt. of Pakistan banned the use of polythene bags?

Answer: The Government of Pakistan has banned the use of polythene bags because they are non-biodegradable. When these materials are burned, they discharge toxic substances into the air, causing air pollution. Non-biodegradable waste is one of the main reasons for land, air, and water pollution.

6-What are the ways by which pollution can be reduced?

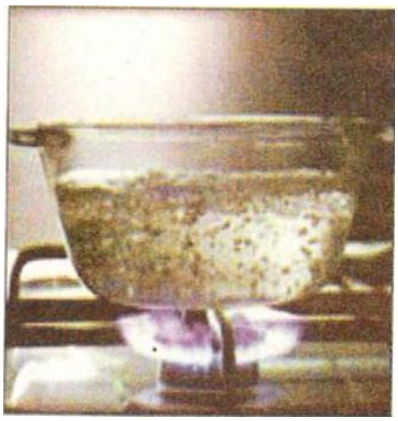
Answer: Pollution can be reduced by following the '4R' principle: 1.Refuse: Avoid using or buying products that cause pollution. For example, refusing to use polythene bags. 2. Reduce: Using less resources helps reduce waste. For example, when we buy less plastic products, we help reduce plastic waste. 3. Reuse: Use items multiple times before throwing them away. For example, using old glass jars to store things instead of buying new ones. 4. Recycle: Convert waste materials into new products to prevent waste of useful materials. For example, collecting used paper to make new paper products.

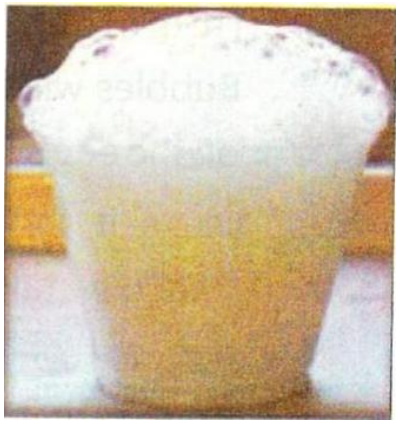
7-Weigh one fourth of a glass of vinegar and a teaspoon of baking soda. Then mix them together. As a result, bubbles will be formed. Weigh this compound again. Now its weight will become less than the previous one. How will you explain the loss of the weight?



Answer: This is a chemical reaction, and the weight loss occurs due to the release of carbon dioxide gas when vinegar and baking soda react. The gas escapes into the air, making the weight of the remaining substance less than the original weight.

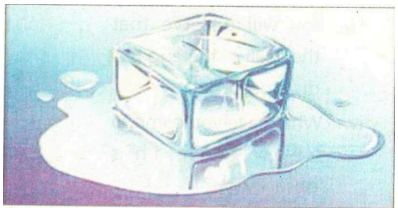
8-A mixture of (a) vinegar and baking soda, (b) vinegar and boiling water both produce bubbles. Out of the two, one is chemical change and the other one is a physical change. Explain.





Answer: The mixture of vinegar and baking soda is a chemical change because a new substance (carbon dioxide gas) is formed with different properties. On the other hand, the mixture of vinegar and boiling water is a physical change because no new substance is formed; bubbles are produced due to the physical process of boiling.

9-A student weighs a piece of ice and then allows it to melt. In your opinion what will be the weight of water and why?



Answer: The weight of the water will be the same as the weight of the piece of ice. When the ice melts, only its state changes from solid to liquid, but its mass remains unchanged. This is because the process of melting is a physical change,and does not result in a new substance.

10-Wood and charcoal are naturally non-luminous objects. Can they be made luminous? How?

Answer: Yes, they can be made luminous. When we burn wood and charcoal, they produce heat and light. The emiting of light during burning makes these objects temporarily luminous.

11-How can you compare the speed of light and speed of sound coming from the lightning?

Answer: The speed of light is much faster than the speed of sound. When lightning occurs, we see the flash of light almost instantly because light travels at about 300,000 km per second. However, we hear the sound of thunder after a delay because sound travels much slower, at about 340 meters per second in air.

12-Some animals like hare and rat actually raise up their ears. When and why do they do that?

Answer: Animals like hares and rats raise their ears to detect sounds more effectively. Their raised ears help them hear better, which is important for sensing dangers or finding food.

13-Mark (✓) for the pleasant sounds and mark (x) for the unpleasant sounds shown in the pictures.

Answer: Parrot: Pleasant, Guitar: Pleasant, Singing: Pleasant, Loud speaker: Unpleasant, Horns: Unpleasant, Thunder: Unpleasant

Q.3: Investigate the given problem.

Marks 40

1-How does air move in our body?

Answer: Air moves in our body through the respiratory system. It enters through the nose or mouth. As air passes through the nasal passage, it is filtered and warmed. It then passes through the throat and trachea, then enters the bronchi and lungs. The bronchi carry air into the lungs. The movement of air is controlled by the diaphragm and rib muscles. During inhalation, the diaphragm contracts and moves down, the rib cage expands, creating negative pressure in the lungs, drawing air in. During exhalation, the diaphragm relaxes and moves up, the rib cage contracts, pushing air out of the lungs.

2-How do the lungs work?

Answer: The lungs work by helping the gas exchange between the air and blood. When we inhale, air fills the lungs, entering tiny air sacs called alveoli. These alveoli are surrounded by tiny blood vessels (capillaries). Oxygen from the air passes through the walls of the alveoli into the blood, while carbon dioxide from the blood passes into the alveoli to be exhaled. The lungs expand during inhalation due to the diaphragm and rib muscles, and contract during exhalation. This continuous process of breathing allows for constant gas exchange, providing oxygen to the body and removing waste carbon dioxide.

3-"All microorganisms are harmful and cause diseases". Prove this idea as incorrect.

Answer: The statement that all microorganisms are harmful and cause diseases is incorrect. In fact, microorganisms are very useful and play beneficial roles in our daily lives. Bacteria and yeasts are used in the production of food. Yeasts are used to make bread and cheese, while bacteria are used in making yoghurt. Microorganisms also play a role in cleaning the environment. Some bacteria help in the decomposition of toxic materials found in sewage and industrial water waste. By helping break down harmful substances, microorganisms help reduce waste from the environment. Furthermore, decomposers play an important role in our ecosystem by breaking down dead organisms and waste matter into simple substances,

recycling nutrients in the environment. Many microorganisms are also used for making medicines. Antibiotics, which are used to kill or stop the growth of disease-causing bacteria, are made from fungi and bacteria. These examples clearly tell us that not all microorganisms are harmful; many are essential for various life processes and human activities.

4-Many people use antibacterial soap to kill the bacteria present on their hands. However due to excessive use of soap, the chance of getting infection increases instead of decreasing. Why does it happen?

Answer: Excessive use of antibacterial soap may increase the chance of infection because it disrupts the body's natural defense mechanisms. The skin has oil glands that secrete chemicals that can weaken or kill bacteria. These natural defenses are part of our body's barrier mechanism against infectious diseases. When we use too much soap, we might be washing away these protective oils along with the harmful bacteria. It is also important to remember that not all microorganisms are harmful. Overuse of antibacterial soap can remove the beneficial bacteria as well. Without these natural protections, our skin might become more at risk to harmful microorganisms. This is why we should follow proper hand washing techniques by washing hands for at least 20 seconds with soap before and after meals and after using the toilet, rather than using too much antibacterial soap.

5-What is the relationship between diseases and pollution?

Answer: Diseases and pollution have a strong connection as different types of pollution can result in harmful diseases in people. Water pollution, caused by sewage and industrial waste, introduces germs and toxic substances into water bodies and can make people sick. It can also kill fish and other water animals. Air pollution, caused by vehicle emissions and industrial activities, releases harmful substances like carbon dioxide and sulfur dioxide into the atmosphere. These pollutants can cause respiratory issues, eye irritation, and skin problems. The formation of smog increases these health risks by causing lung diseases and allergies. Land pollution, often caused by improper waste disposal and the use of chemical fertilizers and insecticides, can contaminate soil and water sources. These pollutants can enter the food chain, resulting in great health risks to humans and animals alike. All types of pollutions can result in diseases, which is why it is important that we protect our environment and keep it clean!

6-Identify biodegradable and non-biodegradable materials present in your environment.

Answer: In my environment, there are two types of materials: biodegradable and non-biodegradable. Biodegradable things are those that can be broken down into simple substances through natural processes. Common examples include vegetables, fruits, meat, and paper. These materials, along with other biodegradable materials like leaves and kitchen waste, can be beneficial to the environment, often serving as natural fertilizers that enhance soil fertility. On the other hand, non-biodegradable materials are those that do not break down/decompose easily. Plastic bags, bottles, and things like computer parts as examples of non-biodegradable materials. These materials impact the ecosystem and make the environment more polluted.

7-Why is the formation of fertilizers from leaves a chemical change?

Answer: The formation of fertilizers from leaves is a chemical change because it involves the process of decay. When leaves decompose to form fertilizer, bacteria and fungi break down the complex organic matter of the leaves into simpler substances. This process changes the chemical composition of the leaves, creating new materials with different properties. The resulting fertilizer has a different chemical structure, appearance, and smell compared to the original leaves. This process cannot be easily reversed, which also indicates that it is a chemical change.

8-Have you ever seen the ears of a frog, locust and fish? How do these animals hear sounds?

Answer: Human beings hear sounds when vibrations enter our ears and are processed by different parts of our ear structure. We also know that sound can pass through air, water, and solid objects. This means that animals living in different environments can still detect sound vibrations. Frogs live both on land and in water, so they might have ways to detect vibrations in both air and water. Locusts, being land insects, likely detect vibrations in the air. Fish, living underwater, would need to detect vibrations in water. While these animals may not have ears that look like human ears, they likely have structures that can detect vibrations in their environment, similar to how our ears detect vibrations in the air. These vibrations would then be interpreted as sound by their brains, just as our brain interprets the signals from our ears as sound.

Q.4: Answer the following questions in short.

Marks 135

1-Name only four organ systems found in human beings.

Answer: Four organ systems found in human beings are the digestive system, respiratory system, circulatory system, and skeletal system.

2-How are the respiratory and circulatory system integrated?

Answer: The respiratory and circulatory systems are integrated in the following way: Oxygen is taken up by the blood from the lungs and carried to all the cells of the body through the circulatory system. The body cells produce carbon dioxide, which is taken up by the blood and transported to the lungs by the circulatory system. The carbon dioxide is then exhaled out of the body through the respiratory system.

3-How is specific information received by the human body?

Answer: Specific information is received by the human body through the sense organs, which include the eyes, ears, nose, tongue, and skin. These organs have special receptors that detect specific types of information and send messages via nerves to the brain for interpretation.

4-How does a human body respond when specific information is received?

Answer: The information received through sense organs is sent to the brain through nerves, where it's processed, and the brain then sends signals for an appropriate response, such as moving muscles.

5-Name the parts of human respiratory system?

Answer: The parts of the human respiratory system are the nose, throat, trachea, bronchus, lungs, bronchioles, ribs, and diaphragm, .

6-Why are the lungs are spongy?

Answer: The lungs look spongy due to the presence of air sacs. The air sacs have a network of thin blood vessels. Air sacs provide a large surface area for gas exchange between the air and blood.

7-Describe the exchange of gases in human lungs.

Answer: The exchange of gases in human lungs takes place in the air sacs. Oxygen from the air sacs passes into the blood, while carbon dioxide from the blood passes into the air sacs to be exhaled out of the body.

8-How does inhalation and exhalation take place?

Answer: Inhalation involves breathing in, where the diaphragm flattens and moves downward, and the ribs move upward and outward, allowing the lungs to expand and air to enter. Exhalation involves breathing out, where the diaphragm relaxes and moves upward, and the ribs move downward and inward, compressing the lungs and expelling air.

9-Why do you need a blood circulatory system?

Answer: The blood circulatory system is needed to transport substances throughout the body. It carries oxygen from the lungs to cells and carbon dioxide from cells to the lungs, as well as nutrients and other materials.

10-Describe and write the function of the heart.

Answer: The human heart is a cone-shaped organ located in the chest between the two lungs. It is about the size of a fist and functions as a pump. The heart has two pumps that lie side by side, and consists of four chambers. Its primary function is to circulate blood through the blood vessels.

11-Write the function of red blood cells.

Answer: Red blood cells are responsible for transporting oxygen from the lungs to various parts of the body and carbon dioxide from the body to the lungs for exhalation.

12-Describe and write the function of the blood.

Answer: Blood is the circulatory fluid of the body. It consists of plasma and blood cells. The primary function of blood is to transport oxygen, nutrients, and other essential substances throughout the body, while also removing waste products like carbon dioxide.

13-Describe and write the function of blood vessels.

Answer: There are three types of blood vessels in the body: arteries, capillaries, and veins. Arteries carry blood away from the heart. Capillaries are the smallest blood vessels and facilitate the exchange of materials between blood and body cells. Veins carry blood towards the heart.

14-Write the function of the white blood cells.

Answer: White blood cells are part of the blood. There are five types of white blood cells in the body. The main function of white blood cells is to protect the body against pathogens.

15-Write the function of the platelets.

Answer: Platelets are fragments of cells. They are responsible for blood clotting and help reduce bleeding when injuries occur.

16-Define microorganisms.

Answer: All those tiny organisms that can only be seen under the microscope are called microorganisms.

17-What are main groups of microorganisms? Give examples of each group.

Answer: The main groups of microorganisms are: Viruses – examples: flu virus, polio virus, COVID-19 virus Bacteria – examples: round, rod-shaped, and spiral bacteria Fungi – examples: mold, Penicillium, yeast

18-Write the name of diseases caused by Virus, Bacteria, and Fungi.

Answer: Hepatitis, Flu, Polio, COVID-19, Measles, Mumps

19-How do microorganisms get transmitted into humans?

Answer: They get transmitted through air, water and food, animals and direct contact.

20-How do infectious diseases spread?

Answer: Infectious diseases can be transmitted from one person to another. They can spread due to germs being transferred through air due to sneezing and coughing, and also due to polluted water, and contaminated food and blood.

21-Differentiate between infectious and non-infectious diseases.

Answer: Infectious diseases can be spread from one person to another whereas non-infectious diseases cannot be spread.

22-What are the methods of preventing the transmission of infectious diseases?

Answer: Washing hands and wearing masks, vaccination, using insect repellent, and sleeping under a mosquito net.

23-How does vaccine protect us from diseases?

Answer: Vaccines introduce weak or dead germs into the body which produces antibodies to fight against those germs.

24-How does the skin, mucus, and stomach acid prevent the entry of microbes into the human body?

Answer: Skin acts a physical barrier for the microbes. There are oil glands on the skin that secrete chemicals that weaken or kill bacteria. The mucus in the nasal passage traps bacteria and stops it from entering the lungs. Stomach acid creates an environment that inhibits the growth of many types of bacteria.

25-Write the advantages of microorganisms.

Answer: Microorganisms help in making food items like bread and yogurt, and in cleaning the environment by decomposing waste.

26-Write two benefits and two harmful effects of bacteria.

Answer: Benefit: Help in digestion and absorption of food in the small intestine Used in making food items like yogurt Harmful effects: Cause diseases in plants, animals, and humans (e.g., pneumonia, typhoid) Spoil food and other organic materials

27-Describe the role of microorganisms as decomposers.

Answer: Microorganisms act as decomposers by helping break down dead organisms and waste matter into simple substances, aiding in nutrient recycling.

28-Describe the defence mechanism against infectious diseases.

Answer: Human body has the ability to defend itself using barriers like skin, mucus, and stomach acid. Skin and mucous membrane lining the respiratory, digestive and urinary tracts serve as barriers to the entry by the microbes. There are oil glands on the skin. Their secretions contain chemicals that weaken or kill bacteria on skin. The mucus in the nasal passage traps the bacteria and prevents their entry into lungs. The stomach has an acidic environment, which inhabits the growth of many types of bacteria.

29-Define ecosystem.

Answer: The ecosystem is the collection of living and nonliving components in any environment.

30-Why does a food chain start with a producer?

Answer: A food chain starts with a producer because producers (usually plants) can make their own food using sunlight through photosynthesis. They are the primary source of energy for all other organisms in the ecosystem.

31-Describe a food chain

Answer: A food chain shows how energy passes from one organism to another. For instance, a plant (producer) is eaten by an insect, and then the insect is eaten by a bird.

32-What is predator prey relationship.

Answer: A predator-prey relationship is when one animal (predator) hunts, kills, and eats another animal (prey).

33-Explain a food web.

Answer: A food web is a group of interconnected food chains within an ecosystem, showing the complex feeding relationships and the interaction between different organisms.

34-How does energy transfer take place in a food chain?

Answer: Energy transfer in a food chain occurs as organisms eat and are eaten. It starts with producers that trap sunlight as energy, then primary consumers eat producers, secondary consumers eat primary consumers, and so on. At each step, about 90% of energy is lost as heat, and only 10% is passed on to the next level.

35-What are decomposers? Why are they important for the ecosystem?

Answer: Decomposers are organisms (like bacteria and fungi) that break down dead organic matter into simpler substances such as mineral salts, carbon dioxide and water. They are important for the ecosystem because they recycle nutrients back into the environment, making them available for producers to use again.

36-Describe the human activities that add toxic substances to an ecosystem.

Answer: Human activities add toxic substances to an ecosystem through emissions from coal-fired power plants, industries, refineries, vehicles, and the use of insecticides like DDT.

37-Write the cause and effect of land pollution

Answer: Land pollution: Cause: Improper waste disposal from agriculture and factories cause land pollution. Effect: Soil contamination results in loss of fertile land, and also causes harm to living things.

38-What are the effects of burning fossil fuels?

Answer: Burning fossil fuels releases carbon dioxide and other greenhouse gases, contributing to global warming and climate change. It also produces pollutants that can harm human health and the environment.

39-Differentiate between biodegradable and non-biodegradable matters. What is their impact on the environment?

Answer: Biodegradable materials are materials that can be broken down and decomposed by natural processes, and can improve soil fertility by returning nutrients to the ecosystem. Non-biodegradable materials do not break down easily and can cause pollution, harm wildlife, and release toxic substances.

40-Define a food chain.

Answer: The flow of energy from producers to consumers in a community is called a food chain.

41-Define herbivores.

Answer: The animals which eat only plants are called herbivores.

42-Define carnivores.

Answer: The animals which eat other animals are called carnivores.

43-Define omnivores.

Answer: The animals which eat plants and other animals are called omnivores.

44-Define predator.

Answer: An animal which eats another living thing by hunting and killing is called a predator.

45-Define prey.

Answer: An organism that is killed and eaten by a predator is called prey.

46-Write the cause and effect of water pollution.

Answer: Water pollution: Cause: Dumping industrial wastes into water causes the water to become polluted. Effect: Plants and animals can not survive in water.

47-Write the cause and effect of air pollution.

Answer: Air pollution: Cause: Vehicle emissions add pollutants such as carbon dioxide to the air and create smog. Effect: Air pollution and smog can cause respiratory diseases in humans.

48-Define a physical change.

Answer: A physical change is a change in which only the appearance of a subject or matter changes, but the chemical composition remains the same.

49-Explain evaporation by giving examples from everyday life.

Answer: Evaporation is when water turns into vapour and moves into the surrounding air. Examples include wet clothes drying, water from lakes, rivers, and oceans turning into vapour, and sweat drying up on our skin.

50-What is rusting and which type of change is this?

Answer: Rusting is when iron reacts with oxygen and water to form rust. It is a type of chemical change.

51-Give an example of chemical change in which carbon dioxide is produced?

Answer: Burning of fuel in a stove where carbon dioxide is produced is an example of a chemical change.

52-Explain three states of matter and their interconversion.

Answer: Matter exists in three states: solid, liquid, and gas. Solid can change to liquid (melting) by absorbing heat, and liquid to solid (freezing) by losing heat. Liquid can change to vapour (boiling/evaporation) by absorbing heat, and vapour to liquid (condensation) by losing heat.

53-Compare physical and chemical changes of matter.

Answer: Physical changes are temporary and involve changes in physical properties without forming a new substance. Chemical changes are permanent, forming new substances with different properties. For example, cutting paper is a physical change as it only changes the paper's shape, while burning paper is a chemical change as it creates new substances like ash and smoke.

54-Define melting.

Answer: The process during which solids become liquid on absorption of heat is called melting.

55-Define freezing.

Answer: The process during which heat is lost from the liquid changing it into a solid is called freezing.

56-Define boiling.

Answer: When a liquid changes into vapours or gas due to heating, it is called boiling.

57-Define evaporation.

Answer: The process through which water changes into water vapours is called evaporation.

58-Define condensation.

Answer: Condensation is when water vapours lose heat, and change from gas into a liquid.

59-Define chemical change.

Answer: A chemical change is the process through which a material combines with another one to form a new material that has new properties.

60-Define decaying.

Answer: Decaying is the process through which bacteria and fungi obtain their food by decomposing dead bodies, and breaking them down into simple components.

61-Define rusting.

Answer: The change that occurs on the surface of iron due to the reaction of oxygen and water is called rusting.

62-What is a transparent object? Write the names of three transparent objects.

Answer: A transparent object allows light to pass completely through it. Three examples of transparent objects are glass, clear plastic, and water.

63-How do translucent and opaque objects differ in their ability to allow light to pass through?

Answer: Translucent objects allow some light to pass through them, so we can only see a faint image through them. Opaque objects do not allow light to pass through them at all, so we cannot see through them.

64-The Moon is non-luminous like our Earth. How does it look luminous to us?

Answer: The Moon looks luminous to us because it reflects the light from the Sun.

65-Why does sound travel faster in metals than air?

Answer: Sound travels faster in metals than in air because the particles in metals are closer together, allowing vibrations to pass more quickly between them.

66-When a train moves away from you, will the intensity of its sound increase or decrease?

Answer: The intensity of the sound will decrease as the train moves away because the sound gets weaker over longer distances.