

Section – A

1. a. Baking a cake
b. Boiling of an egg
2. Filtration.
3. Carbon dioxide

Section – B

4. Burn.
5. Switch/Key.
6. The place where two bones meet in a skeleton is called a joint.

Section – C

7. Sieving is the process to filter components of a mixture of different sizes. Sieving allows fine particles to pass through the holes of the sieve, while the bigger impurities remain on the sieve. Sieving is used in flour mills to separate broken particles of grains from flour. It is also used at construction sites to separate lumps, smaller stones from the mixture of sand and cement.
8.
 1. Allow muddy water to stand undisturbed in a container
 2. After sometime, mud settles at the bottom of the container. This process is called sedimentation.
 3. Upper layer is clear water
 4. Pour the clear water gently in another container. This process is called decantation.
 5. To remove finer impurities we can filter this water again with the help of filter paper. This process is called filtration.
9. (i) Paper can be given different shapes. So folding of paper is a reversible change as sheet of paper can be brought back into the original sheet of paper. But if the paper is burnt it will turn into ash and it can't be reversed.
(ii) When a balloon is filled with air, its shape and size changes. This change can be easily reversed but if balloon bursts, it cannot be reversed and original state cannot be achieved, so it is an irreversible change.
10.
 1. Each magnet has two poles i.e. North Pole(N) and South Pole(S)
 2. Opposite poles of two magnets attract each other while like poles of two magnets repel each other.
 3. A freely suspended magnet always aligns in N-S direction.
11. Hang up the magnet in air by a piece of thread so that it hangs freely. Wait for it to come to rest, and when it comes to rest, we find that the magnet will be pointing in a North - South direction. Now these poles of the magnet can be marked.
12. All living organisms respond to stimuli by moving towards or away from it. Examples
 - i. The increased secretion of saliva on seeing our favorite food is the response to the flavor of the food.
 - ii. A bright flash of light makes us close our eyes or narrow them.
 - iii. The leaves of the 'Touch-me-not' plant close on touching them.
 - iv. The tip of the shoot moves towards light.

13. Take a piece of cardboard and insert two pins into it. Unfold a paper clip and hook one end of it to one of the drawing pins and then bend its other end upward above the other drawing pin. Now you will see that whenever you press this end in such a way that it touches the drawing pin below it, the circuit gets completed.



14. When iron fillings are spread on a sheet and a bar magnet is placed on it, the iron fillings cling to the bar magnet.

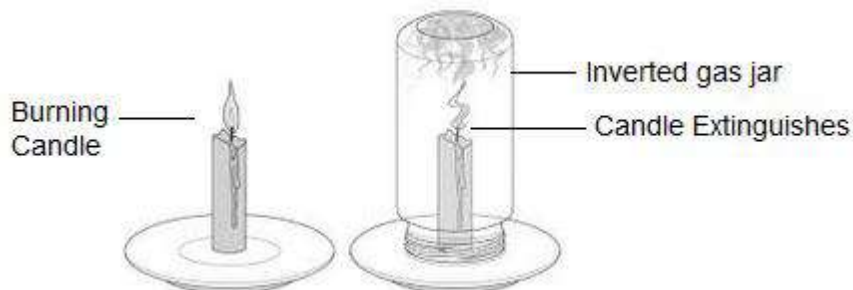
Yes, we find that the iron fillings attract more towards the regions close to the two ends of a bar magnet.

15.

a) Combustion is the process of burning of a substance.

b) Activity: Take a candle and fix it on a table. The candle is lighted. The candle will continue to burn due to continuously available fresh air providing the required oxygen for combustion.

Now cover the burning candle by putting an inverted gas jar over it. After a short time, the candle stops burning and gets extinguished. When the burning candle is covered with a gas jar, the candle takes away the oxygen necessary for burning from the air enclosed in the gas jar. After some time, when all the oxygen in the air inside the gas jar is used up, the burning candle gets extinguished. This proves that air is necessary for combustion of substances.



16. 1. To remove undesirable components

For example, tea is made by boiling tea leaves in water and then adding milk and sugar. After tea is made, the used tea leaves are an undesirable component of the mixture 'tea' and are removed from it by using a tea strainer.

2. To remove harmful components

For example, food grains like rice, wheat, pulses etc. usually contain small pieces of stones, some insects etc. These cannot be consumed and are hence removed from the food grains before use.

3. To obtain a pure sample of a substance

For example, tap water contains some impurities and dissolved salts in it making it an impure mixture. This water is made free of impurities or dissolved salts by the process of distillation and as a result, we get pure water.

4. To obtain a useful component

For example, buttermilk is a mixture from which the useful component 'butter' is separated.

17. (a) If garbage is not removed regularly from our homes and surroundings, they will become dirty. Some of the garbage will decay giving off a foul smell. The rotting garbage will become a breeding ground for disease causing organisms such as cockroaches, flies and mosquitoes.

(b) He should put broken glass pieces in the blue bin and used paper bags in the green bin.

18. (a)

i. We should not put wastes containing salt, oil and milk preparations in the pits, as the disease-causing small organisms start growing in the pit.

ii. Mixing powdered egg shells or sea shells with the wastes help red worms in grinding their food well

(b) Red worms do not survive in very hot or very cold surroundings. They grow well in moist surroundings.

Section – D

19. There is the interdependence of plants and animals. Both plants and animals respire i.e. they inhale oxygen and gives out carbon dioxide in the atmosphere. Plants take carbon dioxide from the atmosphere and prepare food. This is called photosynthesis. During this process, plants give out oxygen to the atmosphere. Therefore plants and animals help each other in the exchange of gases in the atmosphere.

20. An earthworm takes oxygen by absorbing it through its moist skin. It likes slightly wet soil, but when the rains are heavy, the oxygen in the water-logged soil gets run out. Then the earthworms have to come up over the surface of the soil into the air to breathe.

21.

1. Skeleton provides framework and shape to the body.

2. It protects the internal organs (like head. lungs. brain etc.) of the body.

3. Bone marrow (present in long bones) produces red blood cells and platelets.

4. It acts as lever and helps in movement and locomotion.

22. Ribcage is box like structure which is a part of our skeletal system. It consists of 12 pairs of curved bones called ribs. They join the chest bone and the backbone together to form a box. Ribcage protects the internal organs of the body like heart lungs.

23.

1. Skull
2. Ribcage
3. Backbone
4. Pelvic bones
5. Shoulder bones
6. Arms bones and leg bones

24.

Physical Changes

1. Composition of substance remains same No new substances are formed.
2. Change in shape, size or physical state occurs. Chemical properties of substance remain same.
3. Physical changes are reversible.
4. e.g.: Melting of ice, expansion of iron on heating

Chemical Changes

1. Composition of substance changes. New substance is formed.
2. New substances have new shape, physical state, and different physical and chemical properties.
3. Chemical changes are irreversible.
4. e.g. burning of wood, rusting of iron.