

CBSE Board  
Class VI Science  
Term 2  
Sample Paper - 1  
Solution

Time: 3 hrs

Total Marks: 100

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SECTION-A

**Ans1.** Correct Option: [D]

Top layer called horizon A is washed away with the flowing water when it rains heavily.

**Ans2.** Correct Option: [D]

Papier mache is a mixture of clay, paper and rice husk.

**Ans3.** Correct Option: [B]

All the aquatic animals have webbed feet which helps them to swim in water and resists friction of water.

**Ans4.** Correct Option: [C]

The gizzard of the red worms helps in grinding of food.

**Ans5.** Correct Option: [A]

Condensation is the reverse of evaporation.

**Ans6.** Correct Option: [C]

Reproduction is the process by which living organisms produce more organisms of their kind to continue their species on earth.

**Ans7.** Correct Option: [B]

After the harvested crop is dried

**Ans8.** Correct Option: [A]

If a mixture of petrol and water is allowed to stand for some time, they form two separate layers. Petrol forms the top layer that can be separated by decantation.

**Ans9.** Correct Option: [C]

In a solution, the substance in which another substance is dissolved is called solvent.

**Ans10.** Correct Option: [B]

Tar on heating changes to liquid and on cooling forms a solid mass.

**Ans11.** Correct Option: [B]

Falling of branch from tree is an irreversible change.

**Ans12.** Correct Option: [A]

Air is dissolved in water and it escapes when water is heated and therefore tiny bubbles are seen on the surface of boiling water.

**Ans13.** Correct Option: [C]

Photosynthesis does not help in putting back carbon dioxide back into air.

**Ans14.** Correct Option: [A]

In an electric cell, metal cap is the positive terminal of the electric cell and the metal disc is the negative terminal.

**Ans15.** Correct Option: [B]

Metal wires being good conductor of electricity can be used to make an electric circuit.

**Ans16.** Correct Option: [A]

The first diagram has a complete circuit, and hence here the bulb glows.

**Ans17.** Correct Option: [B]

Two batteries provide a greater flow of electricity than one.

**Ans18.** Correct Option: [C]

The ball will move towards point III since there it is attracted by more number of magnets.

**Ans19.** Correct Option: [D]

The iron filings stick maximum to the ends of the magnet where poles are situated.

**Ans20.** Correct Option: [B]

Bar magnets should be kept in pairs with their unlike poles on the same side. They must be separated by a piece of wood while two pieces of soft iron should be placed across their ends.

## SECTION-B

**Ans21.** Water cycle is important because of the following reasons:

- (i) Water cycle makes fresh water available in the form of rain.
- (ii) It keeps the amount of water on the earth's surface constant.

**Ans22.**

- (i) Food colour
- (ii) Pieces of dry leaves
- (iii) Flower petals
- (iv) Pieces of coloured paper

**Ans23.** Flattened fins give stability, and control the direction of movement during swimming.

Slippery scales protect the fish and help in easy movement through water.

**Ans24.** Water from the wet surfaces absorb heat from the surroundings, and get converted into vapours which escape into the atmosphere.

**Ans25.** Oil and water from their mixture can be separated by decantation process. If a mixture of oil and water is allowed to stand for some time, they form two separate layers. The component that forms the top layer i.e. oil can then be separated by decantation.

**Ans26.** The metal rim is made slightly smaller than the wooden wheel. On heating, the rim expands and fits onto the wheel. Cold water is then poured over the rim, which contracts and fits tightly onto the wheel.

**Ans27.** Carbon dioxide gas does not support combustion. When sprayed on a burning object, it cuts off the supply of oxygen and extinguishes the fire.

**Ans28.** The materials which are not attracted towards a magnet are called non-magnetic materials. Examples - rubber and plastic.

**Ans29.** Yes, the bulb will glow in the arrangement shown in the figure because the circuit is complete i.e. there is a continuity in the circuit without any break.

**Ans30.** While storing bar magnets, they should be kept in pairs with their unlike poles on the same side. They must be separated by a piece of wood while two pieces of soft iron should be placed across their ends.

### SECTION-C

**Ans31.**

(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) Redworms do not survive in very hot or very cold surroundings. They need moisture around them.

**Ans32**

(a) The problems faced by people due to drought are:

- (i) In drought conditions, the soil does not have sufficient moisture to grow crops well.
- (ii) The vegetation such as grass and fodder does not grow well and leads to shortage of fodder for domestic animals.
- (iii) Many people living in the areas of drought may migrate to other places along with their domestic animals in search of food and fodder.

(b) The basic idea behind rainwater harvesting is to catch water where it falls on the Earth's surface.

**Ans33.**

- (a) If garbage is not removed regularly from our homes and surroundings then they will become dirty. Some of the garbage will rot giving off 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 blue bin and used paper bags in green bin.

**Ans34.** All living organisms respond to stimuli by moving towards or away from it.

## Examples

- (i) The increased secretion of saliva on seeing our favourite food is the response to the flavour of the food.
- (ii) A bright flash of light makes us wink or close our eyes where light is the stimulus.
- (iii) The leaves of the Touch-me-not' plant droop on touching them.
- (iv) The tip of the shoot moves towards light.

**Ans35.** The mixtures are separated into their components for the following reasons:

1. To remove an undesirable component - Tea is made by boiling tea leaves in water and then adding milk and sugar. After the tea has been made, the used tea leaves become the undesirable component of the mixture 'tea' and are removed from it by using a tea strainer.
2. To remove a harmful component - Food grains like rice, wheat, pulses etc. usually contain small pieces of stones and some insects etc. These are harmful to us and are hence removed from the food grains before using them.
3. To obtain a pure sample of a substance - Tap water contains some dissolved salts in it so it is an impure mixture. This water is made free of dissolved salts or impurities by the process of distillation and as a result, we get a pure sample of water.
4. To obtain a useful component - Milk is a mixture from which useful component 'butter' is separated.

**Ans36.**

- a. Inflating a balloon is a reversible change. When air is blown into a balloon, its shape and size change and the balloon gets inflated. Now when the air filled in the balloon is allowed to escape, the balloon comes back to its original size and shape. Hence, inflating a balloon is a reversible change.

Bursting of balloon is an irreversible change. When a balloon filled with air is bursted, the burst balloon cannot be changed back to its original shape and size. So, changing of shape and size on bursting of balloon cannot be reversed back and is hence an irreversible change.

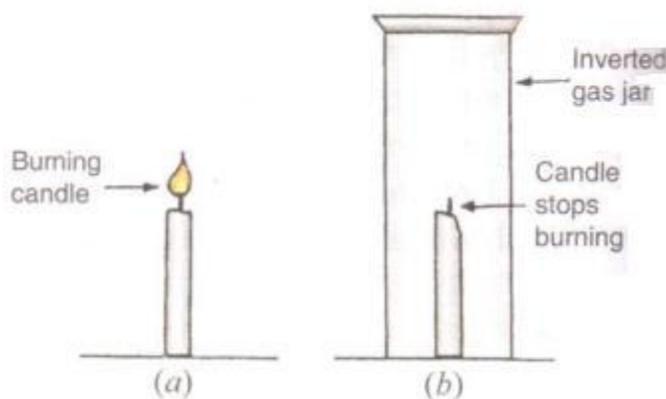
- b. Rolling of a roti is a reversible change. Roti is made by rolling ball of dough into a circular shape. This rolled roti can be easily converted back to the ball of dough i.e. it is a change which can be reversed hence, it is a reversible change.

Baking a roti is an irreversible change. Baked roti cannot be changed back into the original ball of dough i.e. this change can't be reversed. Hence, it is an irreversible change.

**Ans37.**

- (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 gas jar, then the candle takes away the oxygen necessary for burning from the air enclosed in the gas jar. After some time, when all the oxygen of air inside the gas jar is used up, then the burning candle gets extinguished. This proves that air is necessary for combustion of substances.



**Ans38.**

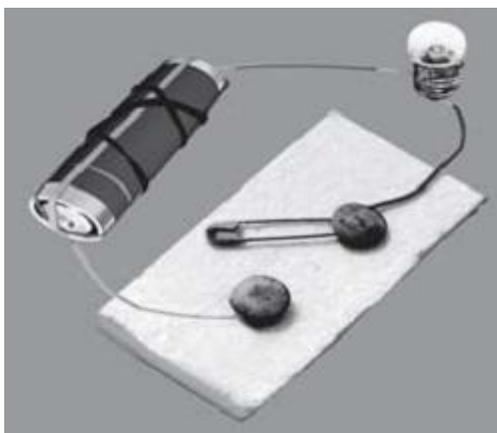
(a)

- (i) Bar Magnet
- (ii) Horse-shoe magnet

(b) In olden days, the travelers used to find directions by suspending natural magnets with a thread. When suspended freely, these magnets will point in north-south direction.

**Ans39.** Take two drawing pins, a safety pin, two wires and a small sheet of thermocol or a wooden board. Insert a drawing pin into the ring at one end of the safety pin and fix it on the thermocol sheet. Make sure that the safety pin can be rotated freely. Now, fix the other drawing pin on the thermocol sheet in a way that the free end of the safety pin can touch it.

The safety pin fixed acts as a switch in this arrangement.



**Ans40.** When the iron fillings are spread on a sheet and a bar magnet is placed on it then 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.

## SECTION-D

**Ans41.** Camel is adapted to the desert conditions because of the following:

- (i) Its limbs contain large pads which help it to move on hot and slippery sand.
- (ii) The hump of the camel is a reservoir of food in the form of fat.
- (iii) It drinks a large quantity of water and stores it in water-cells, muscles and connective tissues.
- (iv) It can live without drinking water for about two weeks. It excretes very little water in the form of urine.
- (v) It can adjust its internal temperature according to the surrounding air. It sweats profusely in the bright sun to maintain its body temperature

**Ans42.**

- (a) The rainwater harvesting from open spaces around the buildings in a city is done by constructing percolation pits covered with concrete slabs having holes in them, and are connected to recharge well through a pipe. The rainwater falling in open spaces goes into the percolation pit through the holes in its concrete slab cover. After filtration in percolation pit, rainwater enters the recharge well through the outlet pipe and gradually seeps into the soil.
- (b) Rainwater harvesting can be done in two ways:
  - (i) Rooftop rainwater harvesting.
  - (ii) Rainwater harvesting from open spaces around buildings.

**Ans43.**

(a) Reversible changes are changes that can be reversed to form the original substance.

Irreversible changes are changes that cannot be reversed to form the original substance.

(b)

- i. If we inflate a balloon, the size and shape of the balloon undergoes a change. However, the original size and shape of the balloon can be obtained back by allowing the air to escape from the balloon. This means that the change that occurs by inflating a balloon can be reversed. But, if the balloon bursts after being inflated, then its original size and shape cannot be obtained back. Thus, in this case, the change cannot be reversed.
- ii. If we fold a piece of paper, then the shape and size of the paper undergoes a change. In this case, the original shape and size of the original paper can be obtained back. Thus, this change can be reversed. However, if we cut the piece of paper, the change in the shape and size of the paper cannot be reversed.
- iii. If we heat solid wax, it melts to form a liquid called molten wax. On cooling, the molten wax becomes solid again i.e. melting of wax is a change that can be reversed hence it is a reversible change. But, if we light a candle, then the wax present in it starts burning to produce carbon dioxide gas, water vapour, soot, heat and light. These products obtained by burning of wax cannot be combined to get back the original candle hence burning of wax is a change that cannot be reversed i.e. it is an irreversible change.

**Ans44.**

- (a) Take a torch bulb and a piece of wire. Remove the plastic covering at the two ends of the wire. Wrap one end of a wire around the base of an electric bulb. Fix the other end of the wire to the negative terminal of an electric cell with a rubber band. Now, bring the tip of the base of the bulb that is, its other terminal, in contact with the positive terminal of the cell. The bulb starts glowing. This is how a home-made torch is made.
- (b) Materials which allow electric current to pass through them are called conductors. Examples - iron, pencil lead etc.