**Class – 6th**

**Chapter-5**

**Sorting Materials into Group**

**Exercises**

**Section I**

**A. Select and tick the correct option :**

**Ans.** 1. a. 2. c. 3. a. 4. c.

**B. Fill in the blanks :**

 1. The things used to make other things are called **materials**.

2. **Classification** is to group together things which have similar properties.

3. Rough material is have **bumps** or **ridges** in their surface.

4. Materials that allow light to pass through them are called **transparent**.

5. **Magnets** attract iron and steel substances.

**A. Very short answer questions:**

 **1.Why do we need to group or classify things around you?**

 We need to group or classify things around us because it makes it easier forus to locate them and work with them.

**2. Write two man-made things and two natural materials**.

Man-made materials-car, television

Natural materials –River, tree

**3.What is lustre?**

 Luster is the shine of a material.

**4.Name a gas that is not soluble in water**.

 Nitrogen

**5.State a difference between conductor and insulator.**

**Ans 5.**Conductors allow electricity to pass through them whereas insulators prevent it to pass through them.

**B. Short answer questions:**

**1.What are called materials?**

**Ans 1.**The things used to make other things are called materials. Wood, steel and

glass are examples of materials.

**2.Define man-made things**.

**Ans 2.** The things which are not found in nature but are manufacture by man are

called man-made or artificial things. For example, plastic, glass and steel.

**3.What is the difference between soluble and insoluble substances?**

**Ans 3.**Materials like salt and sugar which dissolve in waer are said to be soluble in water.

Materials like sand, saw dust and wheat flour do not dissolve in water even after stirring, they are said to be insoluble in water.

**4. Give some examples of floating and sinking.**

**Ans 4.** Some materials float in water where as some materials sink. A pencil,ice,brush,plastic bottle, etc. Float on the surface of water. A coin, an iron nail,a stone etc. sink.

**5.State the difference between soft materials and hard materials.**

**Ans 5.** Materials which can be compressed or scratched easily are called soft while some other materials which are difficult to compress are called hard. For example, cotton or sponge is soft while iron is hard.

**C. Long answer questions:**

 **1.Differentiate among transparent ,opaque and translucent materials. Give two examples of each.**

**Ans 1.** Materials that allow light to pass through them are called transparent materials.We can see through such objects. Some examples of transparent materials

are glass, water, air and some plastics.

Materials that do not allow light to pass through them are called opaque. Wood, metal, cardboard etc. are opaque materials. We cannot see through these materials.

Materials that allow some light to pass through them are called translucent materials. They allow light to pass through them only partially. Some examples

are frosted glass in bathroom windows, butter paper.

**2.What is density? How is it related to the property of floating or sinking in water?**

**Ans 2.** Density of a substance is defined as mass per unit volume.

A substance with a density higher than that of water floats on it, whereas the substance with a density lower than water sinks to the bottom

**3.Write down five properties on the basis of which we can classify materials.**

**Ans 3.** We can classify on the basis of following five properties:-

**Appearance :** The look, feel, texture in addition to lustre, colour and quality defines the property of appearance of the material.Thus ,we can classify materials on the basis of appearance.

**Lustre :** Lustre is the shine of a material. Metals like silver and gold have a shine, whereas wood does not shine that much. Materials like aluminium, iron, copper, silver and gold have luster. Wood and paper being non metals do not have luster.

**Texture :** Materials can be rough or smooth. Rough materials have bumps or ridges in this surface, which can be felt by touching them. Smooth materials lack these bumps.

**Transparency :** Different materials allow different amounts of light to pass through them depending on a property called transparency. On the basis of transparency property, materials can be classified into three categories-transparent, opaque and translucent.

**Electrical Property :** Materials which conduct electricity are called conductors like metals such as copper, iron and silver. We use wires of copper in our household wiring. Materials which do not conduct electricity are called

insulators or bad conductors of electricity like wood, rubber, plastics, air, etc.

**4. Write a note on diffusion.**

**Ans 4.**The process of gases and liquids spreading into a surrounding substance is known as diffusion. If one openes a perfume bottle at one corner of the room, the smell spreads throughout the room. This is because perfume mixes with air. Gases have the highest rate of diffusion but different gases diffuse at different rates.