

## Very Short Answer Questions

**Q.1. It was Paheli's birthday. Her grandmother gave her two gifts made of metals, one old dull silver spoon and a pair of lustrous gold earrings. She was surprised to see the difference in the appearance of the two metals. Can you explain the reason for this difference?**

[NCERT Exemplar]

**Ans.** The silver spoon on long exposure to moist air has lost its shine and appears dull whereas gold does not tarnish.

**Q.2. Mixtures of red chilli powder in water, butter in water, petrol in water, and honey in water were given to Radha, Sudha, Sofia and Raveena, respectively. Whose mixture is in solution form?**

[NCERT Exemplar]

**Ans.** Raveena has got a solution because honey will dissolve in water.

**Q.3. On a bright sunny day, Shikha was playing hide and seek with her brother. She hid herself behind a glass door. Do you think her brother will be able to locate her. If yes, why? If no, why not?**

[NCERT Exemplar]

**Ans.** Yes, glass door is made up of ground glass that is translucent, so Shikha can be located.

**Q.4. Take a small cotton ball and place it in a tumbler/bowl filled with water. Observe it for atleast 10 minutes. Will it float or sink in water and why?**

**Ans.** Cotton ball initially floats and then sinks as it absorbs water.

**Q.5. Which property of gases helps us in detecting leakage of cooking gas?**

**Ans.** The property of diffusion.

**Q.6. Name the two gases used by aquatic plants and animals, that are soluble in water.**

**Ans.** Oxygen and carbon dioxide are used by animals and aquatic plants.

**Q.7. What do you understand by the word 'classification'?**

**Ans.** Classification means grouping the things on the basis of their similarities and dissimilarities.

**Q.8. Raghav has a transparent paper. A liquid drop on it, making the paper translucent. Can you name the liquid that made the paper translucent?**

**Ans.** It was an oil drop.

**Q.9. Give an example to explain that one object can be made from different materials.**

**Ans.** A plate can be made from steel, glass or plastic.

**Q.10. Give one example to explain that different materials are used to make one object.**

**Ans.** A bag is made of cloth, plastic and metal.

**Q.11. What is a combustible material?**

**Ans.** A material which burns on heating at a particular temperature is a combustible material.

## Short Answer Questions

**Q.1. Which among the following materials would you identify as soft materials and why?**

Ice, rubber band, leaf, eraser, pencil, pearl, a piece of wooden board, cooked rice, pulses and fresh chapati

[NCERT Exemplar]

**Ans.** Rubber band, leaf, eraser, cooked rice and fresh chapati are soft materials because they can be compressed or scratched easily.

**Q.2. You are provided with the following materials—turmeric, honey, mustard oil, water, glucose, rice flour, groundnut oil.**

Make any three pairs of substances where one substance is soluble in the other and any three pairs of substances where one substance remains insoluble in the other substances.

[NCERT Exemplar]

**Ans. Soluble:**

- i. Honey in water
- ii. Glucose in water
- iii. Groundnut oil in mustard oil

**Insoluble:**

- i. Turmeric in water
- ii. Rice flour in water
- iii. Mustard oil in water

**Q.3. Sugar, salt, mustard oil, sand, sawdust, honey, chalk powder, petals of flower, soil, copper sulphate crystals, glucose, wheat flour are some substances given to Paheli. She wants to know whether these substances are soluble in water or not. Help her in identifying soluble and insoluble substances in water.**

[NCERT Exemplar]

**Ans.** Soluble in water—Sugar, Salt, Honey, Copper sulphate crystals, Glucose.

Insoluble in water—Mustard oil, Sand, Sawdust, Chalk powder, Soil, Petals of flower, Wheat flour.

**Q.4. Why do we classify materials into different groups?**

**Ans.** Materials are classified into different groups for the following reasons:

- i. For the convenience of identifying and locating the different materials.
- ii. To study their properties and identify common patterns among them.

**Q.5. How is density of an object related to its floating or sinking?**

**Ans.** An object will only float if its density is less than that of the surrounding liquid. It will sink if its density is greater than that of the surrounding liquid.

**Q.6. Give one example of each of a combustible liquid, gas and solid.**

**Ans.** Petrol is a combustible liquid, CNG is a combustible gas and paper is a combustible solid

**Q.7. Why do you think oxygen dissolved in water is important for the survival of aquatic animals and plants?**

[NCERT Exemplar]

**Ans.** Dissolved oxygen is available for animals and plants for respiration and survival.

## Long Answer Questions

**Q.1. Define soluble, insoluble substances and solubility.**

**Ans.** The substances which dissolve in water are called soluble substances. For example: Salt, sugar, milk, etc. The substances which do not dissolve in water are called insoluble substances. For example: Chalk powder, sand, stone, etc. The property of substance due to which it dissolves in water is called solubility.

**Q.2. Chalk, iron nail, wood, aluminium, candle, cotton usually look different from each other. Give some properties by which we can prove that these materials are different.**

**Ans.**

The given materials can be differentiated on the basis of lustre, hardness, softness, roughness or smoothness.

	Lustre	Hardness	Softness	Roughness	Smoothness
Chalk			✓	✓	
Iron nail	✓	✓		✓	
Wood		✓		✓	
Aluminium	✓	✓			✓
Candle	✓		✓		✓
Cotton			✓		✓

**Q.3. Differentiate among opaque, translucent and transparent materials, giving one example of each.**

[NCERT

Exemplar]

**Ans.**

S. No	Opaque materials	Translucent materials	Transparent materials
1	Objects cannot be seen through them	Objects can be partially seen through them	Objects can be seen clearly through them
2	Example: Cardboard	Example: Oiled paper	Example: Hand lens

**Q.4. How can materials be grouped together? In what ways do we classify materials?**

**Ans.** Different materials have different properties. Materials with similar properties can be grouped together.

Different types of materials can be grouped based on any of the following properties:

- Appearance
- Solubility
- Transparency
- Conductivity
- Combustibility—Easily burn or not.
- Attraction towards magnet.

### **Hots (Higher Order Thinking Skills)**

**Q.1. A solid is put in a bucket of water. It floats just below the surface of the water. What do you think is the density of the object with relation to the density of water?**

**Ans.** The density of the solid and water is same because solid neither sinks nor floats on water.

**Q.2. Water and starch are mixed in a container. What kind of solution will be get?**

**Ans.** When little amount of starch is added it will dissolve in water. But as the amount of starch increases, the solution starts thickening and forms a suspension.