

Materials and Their Properties

Materials

- Anything which has mass and occupies space is known as **matter**.
- The matter from which an object can be made is called material.
 e.g. Glass, metal, plastics, wood, cotton paper, soil, etc.

Properties of Materials

Following are the various properties of materials

Appearance

On the basis of the appearance of the material, they are categorised into two types: **Shiny** and **dull** materials.

- e.g. Iron, copper, aluminium, gold, etc, have a shiny appearance i.e., lustre.
 - Paper, chalk, plastic, rubber, etc, have dull appearance.

Hardness and Softness

- Materials which can be compressed and scratched easily are called soft materials, e.g. Cotton or sponge, etc.
- Materials which are difficult to compress are called hard materials,
 e.g. Iron, rod, etc.

Solubility of Materials

- On the basis of ability of a material to dissolve in water, i.e. solubility, the materials are categorised into two types soluble and insoluble materials.
- Materials which completely disappear or get dissolved in water are called soluble materials, e.g. Sugar, salt, etc.
- Materials which do not mix or get disappeared on mixing with water are called insoluble materials, e.g. Sand, dust, etc.

Floating or Sinking Property

- Some materials that do not mix in water rather floats on its surface are called floating materials, e.g. Dried leaves fallen on the surface of water, plastic ball, etc.
- Heavy materials which sink easily to the bottom of the water are called sinking materials, e.g. Stone, drops of honey, etc.

Transparent, Opaque and Translucent

- The substances or materials through which an object can be seen clearly are called transparent material, e.g. Glass, water, etc
- The materials through which we are not able see object and which do not allow light to pass through them, are called opaque materials, e.g. Wood, cardboard, etc.
- The materials through which an object can be seen but not clearly are called translucent materials, e.g. Oil paper, muslin, cloth, etc.

Practice Exercise

1.	Which of the following a material?	ng in a matter but not	8.	Which of the following statements is not true?						
	(a) Iron rod(c) Glass	(b) Oxygen gas(d) Plastic		(a) Materials are groupe(b) Materials are groupe						
2.	Which of the following lustrous? (a) Gold	ng materials is not (b) Silver		properties (c) Materials are grouped for fun (d) Materials are grouped according to their uses						
	(c) Wood	(d) Diamond	9.	Dried leaves will	on the pond.					
3.	Which one of the foll compressed or scratch			(a) sink (b) float (c) first sink then float (d) None of these						
	(a) Cotton (c) Wood	(b) Aluminium(d) Iron rod	10.	A boy throws a stone will	on river. The stone					
4.	Find the odd one out (a) Tawa (c) Pressure cooker	from the following. (b) Spade (d) Eraser		(a) sink(b) float(c) bounce back to the same place(d) None of the above						
5.	Pick one material from is completely soluble (a) Chalk powder (c) Glucose	m the following which in water. (b) Tea leaves (d) Sawdust	11.	Which type of the following materials is used for making the front glass (wind screen) of a car?						
6.	Materials which do n are called mat			(a) Transparent(c) Opaque	(b) Translucent(d) All of these					
	(a) insoluble (c) transparent	(b) soluble (d) opaque	12.	A glass filled withfres (a) opaque (c) translucent	sh water is said to be (b) transparent (d) None of these					
7.	Which pair of substar following would float half-filled with water (a) Cotton thread, therr (b) Feather, plastic ball (c) Pin, oil drops (d) Rubber band, coin	t in a tumbler ?	13.	You are provided with materials like magnifying glass, mirror, stainless steel plate, glass tumbler. Which of the following material is transparent among them? (a) Magnifying glass (b) Mirror (c) Glass tumbler (d) Both (a) and (c)						

Answers

1	(b)	2	(c)	3	(a)	4	(d)	5	(c)	6	(a)	7	(b)	8	(c)	9	(b)	10	(a)
11	(a)	12	(b)	13	(d)														