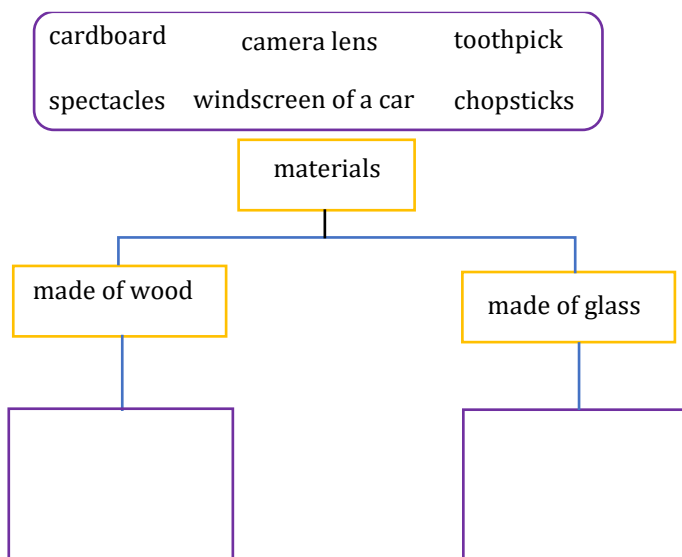




## Sorting Materials into Groups – DPP-01

## Multiple choice questions

- Which of the following is not an example of material?  
(1) Air (2) Milk  
(3) Table (4) Feeling
- Which of the following is not made up of same type of material?  
(1) Wire (2) Coin (3) Pin (4) Cotton
- Which of the following material has different property from others?  
(1) Glass (2) Spoon (3) Bowl (4) Cloth
- Which of the following is a gaseous substance?  
(1) Glass (2) Water vapour (3) Milk (4) Iron
- In the box given below, some substances have been listed. Classify them according to the materials they are made of.



## True or False

- Steam is an example of gas.
- Air is a pure substance.
- Soil is not a material.
- Different materials have different kind of properties.

**Fill in the blanks**

10. Classification of ..... makes their study easy and systematic.
11. Find the odd one out.
- (i) Appearance, solubility, transparency, chemical reactivity
  - (ii) Iron, Aluminium, copper, wood
  - (iii) Juhi, champa, rose, carrot
  - (iv) Cup, Juice, book, bottle.
  - (v) Wood, sponge, diamond, glass
12. Leaf : Float :: coin : \_\_\_\_\_

**Subjective Questions**

13. Define classification.
14. Define materials.
15. Group the objects given below based on the shape.  
Ball, Orange, Bangles, Samosa, Kite.

## SOLUTIONS DPP – 01

## Answer key

Question	1	2	3	4
Answer	4	4	4	2

1. **Option (4)**

Milk, air and table have mass and occupy space so these are matters. Feeling is not a matter.

2. **Option (4)**

Wire, pin and coins are made up of metals. Cotton is a different material.

3. **Option (4)**

Glass, spoon and bowl are used for eating purpose. Cloth is a material that is used for making dresses or other purpose.

4. **Option (2)**

Water vapour is a gaseous substance. Glass and iron are solid material. Milk is liquid.

## 5. Made of wood → chopsticks, toothpick, cardboard

Made of glass → camera lens, wind screen of car, spectacles

6. **True**

Steam is a gaseous state of water so it is an example of gas.

7. **False**

Air is not a pure substance.

8. **False**

Soil is a material.

9. **True**

Different materials have different kind of properties. For example- gold is yellow in color, Copper has reddish brown color, Iron is hard substance etc.

10. **materials**

Classification of materials makes their study easy and systematic.

## 11. (i) chemical reactivity      (ii) wood      (iii) carrot

(iv) juice      (v) sponge

12. **sink**

Coin will sink in water because it is heavy than water.

## 13. The act of dividing things into category, according to some common relations, called classification.

## 14. All objects are made of some substances called materials.

15. **Round shape**

Ball, Orange, Bangles

**Triangular shape**

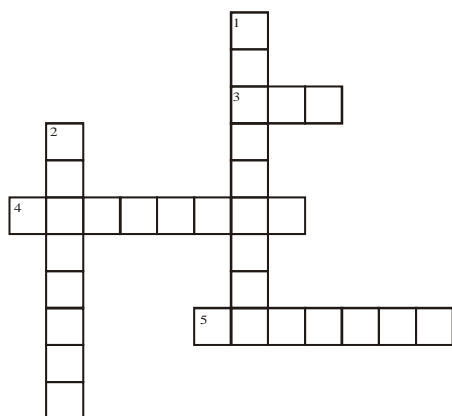
Samosa, Kite



### Sorting Materials into Groups DPP – 02

#### Multiple choice questions

- Which of the following is a softest substance?  
 (1) Cotton                      (2) Foam                      (3) Talc                      (4) Wax
- An example of a lustrous material is-  
 (1) oxygen                      (2) nitrogen                      (3) wood                      (4) silver
- Which of the following is a hardest material?  
 (1) Salt                      (2) Iron                      (3) Diamond                      (4) Stone
- Pick the odd one out on the basis of appearance.  
 (1) Wood                      (2) Gold                      (3) Plastic                      (4) Chalk
- Puzzle



#### Down

- A metamorphic rock from which talc is obtained
- Largest diamond found in Africa

#### Across

- Mixture of gases
- All materials are made up of \_\_\_\_\_.
- A liquid lustrous metal

#### True or False

- All gases are lustrous.
- Glass is a hard substance.
- The largest diamond is Cullinan.

**Fill in the blanks**

9. Copper have a ..... lustre on its surface.
10. Special kind of shine present on natural materials or shine appears when they are freshly cut is called as \_\_\_\_\_.
11. All \_\_\_\_\_ are non-lustrous.

**Subjective Questions**

12. Why are diamonds used to cut glass?
13. Name the rock from which talc is obtained.
14. How is hardness of a material determined?
15. Define lustrous material.

## SOLUTIONS DPP – 02

## Answer key

Question	1	2	3	4
Answer	3	4	3	2

1. **Option (3)**

Talc obtained from soapstone is the softest substance.

2. **Option (4)**

Silver is a lustrous material. Nitrogen, oxygen and wood gases are non-lustrous.

3. **Option (3)**

Diamond is the hardest substance naturally occurring substance.

4. **Option (2)**

Gold is a lustrous material. Chalk, plastic and wood is non-lustrous.

5. **Down**

1. SOAPSTONE

2. CULLINAN

**Across**

3. AIR

4. ELEMENTS

5. MERCURY

6. **False**

All gases are non-lustrous.

7. **True**

Glass is a hard substance.

8. **True**

The largest diamond is Cullinan, found in Africa.

9. **reddish brown**

Copper has a reddish brown lustre on its surface.

10. **lustre**

Special kind of shine present on natural materials or shine appears when they are freshly cut is called as lustre.

11. **gases**

All gases are non-lustrous.

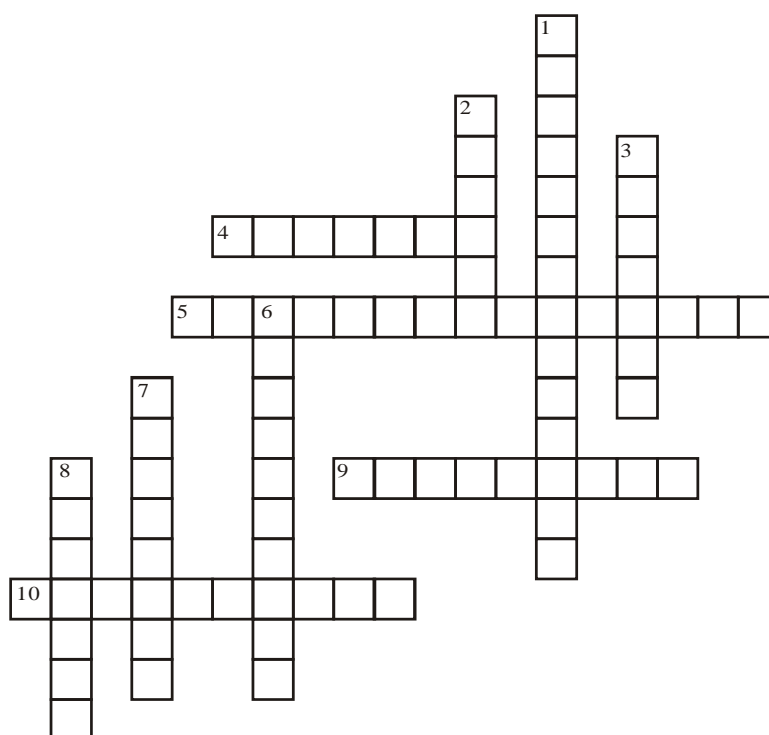
12. **Glass is a hard substance, diamonds can be used to scratch glass because diamond is hardest substance.**13. **Metamorphic rock from which talc is obtained.**14. **When the surfaces of two different materials are rubbed against each other, then the surface which scratches is said to be hard and the property is called hardness of the material. Conversely, the surface which gets scratched is said to be soft as compared to the scratching surface.**15. **The materials which have natural shine on their surface or the shine appears when they are freshly cut or sand papered are called lustrous materials.**



### Sorting Materials into Groups DPP – 03

#### Multiple choice questions

- Which of the following substance will not dissolve in water?  
(1) Salt                      (2) Sugar                      (3) Glass powder                      (4) Washing soda
- Which of the following substance is soluble in water?  
(1) Sand                      (2) Salt                      (3) Chalk powder                      (4) Sawdust
- Which of the following substance is insoluble in water?  
(1) Salt                      (2) Copper sulphate                      (3) Sugar                      (4) Iron filling
- An example of miscible liquids  
(1) vinegar and oil                      (2) lemon juice and water  
(3) coconut oil and water                      (4) mercury and water
- An example of immiscible liquids-  
(1) vinegar and water                      (2) water and milk  
(3) alcohol and water                      (4) kerosene and water
- Puzzle**



**Across**

4. All materials are further made up of simpler materials which is known as
5. Liquids which dissolve in water
9. All objects are made of substances which is known as
10. Liquids which do not dissolve in water

**Down**

1. Act of dividing things into category according to some common relation or affinities.
2. special kind of shine present on natural materials.
3. A liquid metal which is lustrous
6. A property of substance due to which it dissolve in water.
7. A physical form of carbon which is lustrous
8. The hardest naturally occurring substance which is made of carbon.

**True or False**

7. Coffee is soluble in water.
8. Metals are soluble in water.
9. Mercury is soluble in water.

**Fill in the blanks**

10. The liquids which dissolve in water are called\_\_\_\_\_.

**Subjective Questions**

11. (a) Name a form of carbon which is lustrous.  
(b) Name the largest diamond.  
(c) Give name of a liquid in which coconut oil is miscible.
12. Differentiate between miscible and immiscible liquids.
13. Give example of two insoluble substances in water.
14. Why water is called universal solvent?
15. What is the meaning of the aqueous?



## SOLUTIONS DPP – 03

## Answer key

Question	1	2	3	4	5
Answer	3	2	4	2	4

1. **Option (3)**

Salt, sugar and washing soda are soluble in water. Glass powder is insoluble in water.

2. **Option (2)**

Salt is soluble in water.

3. **Option (4)**

Iron filling do not dissolves in water. So it is insoluble in water.

4. **Option (2)**

Lemon juice and water mix with each other. So, these are miscible liquids.

5. **Option (4)**

Kerosene oil and water are immiscible liquids.

6. **Across**

4. ELEMENT

5. MISCIBLE LIQUIDS

9. MATERIALS

10. IMMISCIBLE

**Down**

1. CLASSIFICATION

2. LUSTRE

3. MERCURY

6. SOLUBILITY

7. GRAPHITE

8. DIAMOND

7. **True**

Coffee is a soluble substance in water.

8. **False**

Metals are insoluble in water.

9. **False**

Mercury is not soluble in water.

10. **Miscible liquids**

The liquids which dissolve in water are called miscible liquids.

## 11. (a) Graphite

(b) Cullinan

(c) Kerosene

## 12. The liquids which dissolve in water are called miscible liquids.

The liquids which do not dissolve in water are called immiscible liquids.

## 13. Sand, Chalk are insoluble in water.

## 14. Most of the substance are soluble in water. That's why water is called universal solvent.

## 15. Aqueous means excess of water. It is generally more than what is actually needed.



## Sorting Materials into Groups DPP – 04

**Multiple choice questions**

1. Find the substance that is heavier than water.  
(1) Alcohol                      (2) Plastic ball                      (3) Chalk powder                      (4) Coconut oil
2. A substance ..... than water floats on it.  
(1) lighter                      (2) heavier                      (3) miscible                      (4) insoluble
3. Which of the following substance will float on the water?  
(1) Petrol                      (2) Leaf                      (3) Ice cube                      (4) All of the above
4. Which of the following objects will sink in water?  
(1) Key, leaf                      (2) Coin, wood                      (3) Coin, leaf                      (4) Key, coin

**True or False**

5. Chalk powder floats on the surface of water.
6. The substances which are heavier than water sink in it.

**Fill in the blanks**

7. Coconut oil and kerosene oil \_\_\_\_\_ on the surface of water.
8. Fizzy drinks contain \_\_\_\_\_ dissolved in water.
9. Plastic ball : Float :: Stone : \_\_\_\_\_
10. Leaf : Float :: coin : \_\_\_\_\_

**Subjective Questions**

11. Which of the following materials sink in water ?  
Stone, wax, wood, metal coin, ice
12. What is floatation? Explain with example.
13. Which principle is related to floating and sinking?
14. Why oil floats in gravy?
15. Group the objects below based on the floating and sinking in water.  
Key, Coin, Leaf, Plastic ball, Screw, Ice.

## SOLUTIONS DPP – 04

## Answer key

Question	1	2	3	4
Answer	3	1	4	4

1. **Option (3)**

Chalk powder is heavier than water so it will sink in it.

2. **Option (1)**

A substance lighter than water floats on it.

3. **Option (4)**

Petrol, leaf and ice cube will float on the surface of water.

4. **Option (4)**

Key and coin are heavier than water, so they will sink in water.

5. **False**

Chalk powder is heavier than water so, it will sink in water.

6. **True**

The substances which are heavier than water will sink in it.

7. **Floats**

Coconut oil and kerosene oil floats on the surface of water.

8. **Carbon dioxide**

Fizzy drinks contain carbon dioxide dissolved in water.

## 9. Plastic ball : Float :: Stone : Sink

## 10. Leaf : Float :: coin : Sink

## 11. Stone, Metal coin will sink in water.

## 12. The act of floating is known as floatation. Leaf, boat, wood are float on water because they are light in weight.

## 13. The principle of floatation and sinking is related to heaviness and lightness of a material. The material is heavier than water will sink in water whereas the material is lighter than water will float in water.

## 14. Oil is lighter than gravy or other constituents so it will float on gravy.

## 15. Floats on water      Sink in water

Leaf      Key

Ice      Coin

Plastic ball      Screw

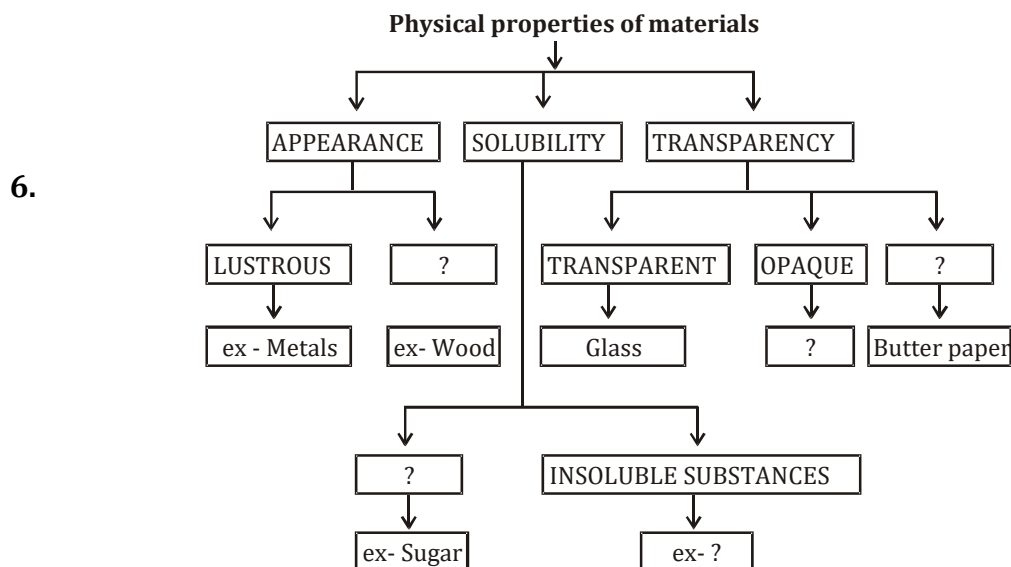
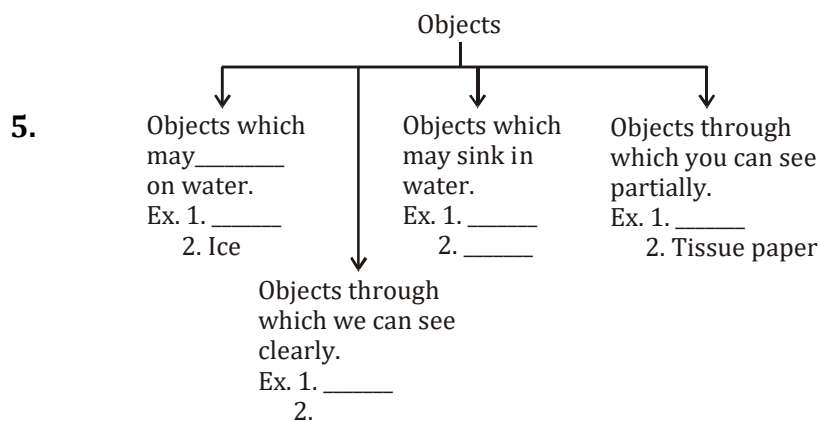


### Sorting Materials into Groups DPP – 05

#### Multiple choice questions

- Shopkeepers usually prefer to keep items in  
 (1) translucent glass container (2) opaque plastic container  
 (3) steel container (4) transparent glass container
- An example of an opaque material is  
 (1) water (2) butter paper (3) glass (4) steel
- An example of a translucent material is  
 (1) Iron (2) frosted glass (3) kerosene (4) stone
- An example of a transparent material is  
 (1) metal (2) ground glass (3) air (4) paper

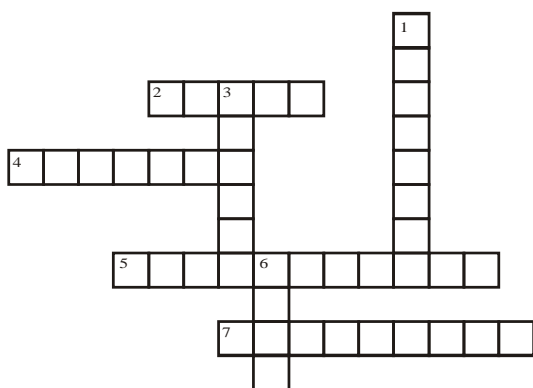
#### Complete the chart



**Match the column**

7.

Column-I		Column-II	
(A)	Transparent solid material	(p)	Alcohol
(B)	Translucent solid material	(q)	Glass
(C)	Miscible in water	(r)	Oil
(D)	Immiscible in water	(s)	Paper (few drop of oil spreaded on it)

8. **Puzzle****Across**

2. Plastic ball will \_\_\_\_ on water.  
 4. A property of material through which you cannot see.  
 5. All gases are \_\_\_\_ in nature.  
 7. Water is a \_\_\_\_ solvent.

**Down**

1. Vinegar and water are \_\_\_\_ liquids.  
 3. Gas which is quite soluble in water.  
 6. Substance heavier than water \_\_\_\_\_ in it.

**True or False**

9. Oxygen is an example of translucent material.  
 10. Certain kind of plastic are transparent material.  
 11. Tissue paper, ground glass, frosted glass are examples of transparent materials.  
 12. Property of material through which you can see is called opacity.

**Fill in the blanks**

13. Materials through which you can see are called \_\_\_\_\_.  
 14. Oxygen : Transparent :: Paper : \_\_\_\_\_

**Subjective question**

15. What is opacity?

## SOLUTIONS DPP – 05

## Answer key

Question	1	2	3	4
Answer	4	4	2	3

1. **Option (4)**

Shopkeepers usually prefer to keep items in transparent glass container. So buyer can easily see items.

2. **Option (4)**

Steel is an example of opaque material.

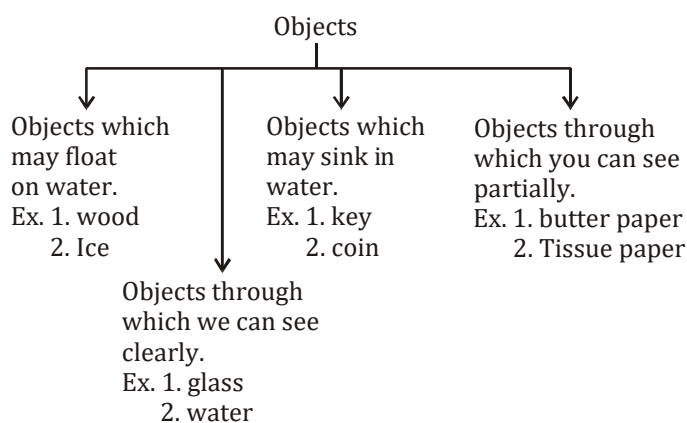
3. **Option (2)**

Frosted glass is a translucent material.

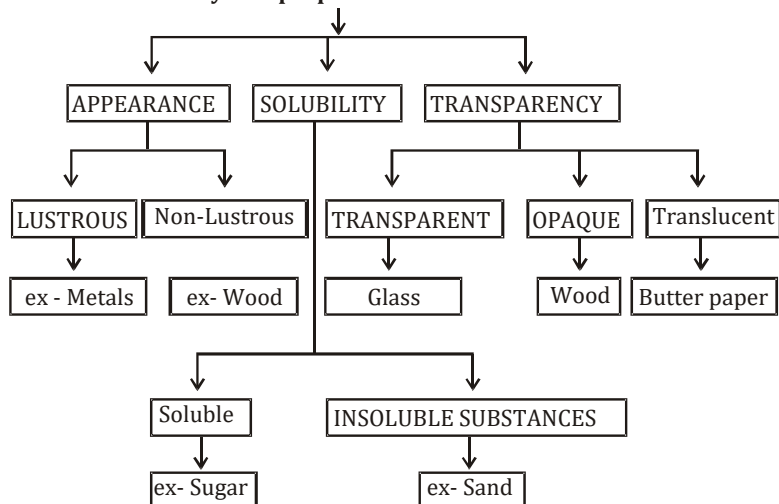
4. **Option (3)**

Air is transparent. Generally, all gases are transparent.

5.



## Physical properties of materials



6.

7. A - q ; B - s ; C - p ; D - r

- 8. Across**
- 2. Float
  - 4. Opacity
  - 5. Transparent
  - 7. Universal
- Down**
- 1. Miscible
  - 3. Oxygen
  - 6. Sink
- 9. False**  
Oxygen is transparent gas.
- 10. True**  
Certain kind of plastics is transparent. It depends on the plastic and its manufacturing.
- 11. False**  
Tissue paper, ground glass, frosted glass are examples of translucent materials.
- 12. False**  
Property of material through which you can see is called transparency.
- 13. Transparent**  
Materials through which you can see are called transparent.
- 14. Opaque**  
Oxygen : Transparent :: Paper : Opaque
- 15.** The property of materials through which you cannot see is called opacity.