

**Class: IX**  
**Subject: chemistry**  
**Topic: Is Matter Around us Pure**  
**No. of Questions: 20**  
**Duration: 60 Min**  
**Maximum Marks: 60**

1 A mixture of oil and water is an example of \_\_\_\_\_.

1. compound
2. two elements
3. mixture
4. true solution

**Answer: 3**

**Explanation:** In chemistry, a **mixture** is a material system made up of two or more different substances which are mixed but are not combined chemically. A **mixture** refers to the physical combination of two or more substances on which the identities are retained and are mixed in the form of solutions, suspensions, and colloids.

2 A mixture of mercury and copper is an example of \_\_\_\_\_.

1. solid and solid
2. liquid and solid
3. solid and liquid
4. liquid and liquid

**Answer: 2**

**Explanation: Fact**

3 Which of these elements is not a metalloid?

1. Tungsten
2. Germanium
3. Bismuth
4. Antimony

**Answer:** 1

**Explanation:** A *metalloid* is a chemical element with properties in between, or that are a mixture of, those of metals and nonmetals

4 Which one of the following is monoatomic?

1. Oxygen
2. Hydrogen chloride gas
3. Argon
4. Ammonia

**Answer:** 3

**Explanation:** *Argon* is a chemical element with symbol Ar and atomic number 18. It is in group 18 of the periodic table and is a noble gas.

5 Which of the following is not a mixture?

1. Blood
2. Silver coins
3. Saliva
4. Plutonium

**Answer:** 4

**Explanation:** *Plutonium* is a transuranic radioactive chemical element with symbol Pu

6 Which property does not describe a compound?

1. It is a pure substance.
2. It is mixed in any proportion by mass.
3. It cannot be separated into constituents by physical means.
4. It is composed of two or more elements.

**Answer:** 2

**Explanation:** A **compound** is a substance formed when two or more chemical elements are chemically bonded together. Two types of chemical bonds common in **compounds** are covalent bonds and ionic bonds. The elements in any **compound** are always present in fixed ratios.

7 The quantity of solute present in a given amount of solution represents \_\_\_\_\_

1. solubility
2. concentration
3. sublimity
4. saturation

**Answer:** 2

**Explanation:** In chemistry, *concentration* is the abundance of a constituent divided by the total volume of a mixture.

8 In a colloidal solution \_\_\_\_\_

1. the size of a colloidal particle lies roughly between 0.1 nm to 1 nm.
2. the particles have a tendency to settle when the solution is left standing.
3. the particles pass through ultrafilter papers and animal and vegetable membranes.
4. the dispersed phase is uniformly distributed in the dispersion medium

**Answer:** 4

**Explanation:** Factual

9 When sodium oxide reacts with water it undergoes chemical change to form \_\_\_\_\_.

1. hydrogen
2. sodium hydroxide
3. sodium nitride
4. sodium chloride

**Answer:** 2

**Explanation:**

Water = H<sub>2</sub>O

Reaction:



NaOH = Sodium Hydroxide

10 Chemical changes are \_\_\_\_\_.

1. temporary, reversible and a new substance is produced
2. always accompanied by exchange of light
3. permanent, irreversible and a new substance is produced
4. never accompanied by exchange of light and heat energy

**Answer:** 3

**Explanation: Factual**

11. Which pair is a miscible liquid mixture?

1. Methyl alcohol and acetone
2. Mercury and alcohol
3. Benzene and water
4. Carbon disulphide and water

**Answer:** 1

**Explanation: Factual**

**12** Iron rod turns red on heating. The change is a\_\_\_\_\_

1. physical change
2. temporary
3. physical and chemical change
4. chemical Change

**Answer:** 1

**Explanation: Factual**

**13** Which one of the following does not sublime?

1. Camphor
2. Charcoal
3. Naphthalene
4. Iodine

**Answer:** 2

**Explanation: Factual**

**14.** Which technique is used to separate a solid-solid mixture?

1. Sedimentation
2. Evaporation
3. Distillation
4. Sublimation

**Answer:** 4

**Explanation: Sublimation** is the transition of a substance directly from the solid to the gas phase without passing through the intermediate liquid phase. **Sublimation** is an endothermic phase transition that occurs at temperatures and pressures below a substance's triple point in its phase diagram.

15. On adding excess salt to a solution, it shows no change in solubility. This shows\_\_\_\_\_

1. crystallization
2. slow Diffusion
3. saturation
4. dissolution

**Answer:** 3

**Explanation:**The term saturated solution is used in [chemistry](#) to define a solution in which no more solvent can be dissolved. It is understood that saturation of the solution has been achieved when any additional substance that is added results in a solid precipitate or is let off as a gas.

16. The process used to separate a mixture of ammonium chloride and iodine is \_\_\_\_\_.

1. sublimation
2. magnetic separation
3. solvent extraction
4. chromatography

**Answer:** 3

**Explanation: Solvent extraction** is a process whereby two immiscible liquids are vigorously shaken in an attempt to disperse one in the other so that solutes can migrate from one **solvent** to the other. The picture on the right shows the shape of a traditional separator funnel.

17 An example of a chemical change is \_\_\_\_\_.

1. formation of clouds
2. glowing of an electric light
3. dropping sodium into water
4. dissolving of salt in water

**Answer:** 3

**Explanation: Fact**

18 A true solution is a \_\_\_\_\_.

1. homogeneous mixture
2. heterogeneous mixture
3. pure compound
4. impure compound

**Answer:** 1

**Explanation:** A homogeneous mixture is a type of mixture in which the composition is uniform. A heterogeneous mixture is a type of mixture in which the composition can easily be identified since there are two or more phases present. Air is a homogeneous mixture of the gaseous substances nitrogen, oxygen, and smaller amounts of other substances. Salt, sugar, and many other substances dissolve in water to form homogeneous mixture.

19. Fractional crystallization is used to separate which of the following?

1. Two solids
2. Two liquids
3. Two gases
4. A solid and a liquid

**Answer:** 1

**Explanation:** In chemistry, **fractional crystallization** is a method of refining substances based on differences in solubility. If a mixture of two or more substances in solution is allowed to crystallize, for example by allowing the temperature of the solution to decrease, the precipitate will contain more of the least soluble substance.

20. Tyndall Effect in colloids is due to \_\_\_\_\_.

1. dispersion of light
2. merging of light rays
3. scattering of light
4. convergence of light rays

**Answer:** 3

**Explanation:** The Tyndall Effect is the effect of light scattering in many directions in colloidal dispersion, while showing no light in a true solution. This effect is used to determine whether a mixture is a true solution or a colloid.