

**BALABHADRA SKILL DEVELOPMENT ACADEMY**  
**SCIENCE QUESTION BANK - 8**

Time: 1 Hour

Full marks: 56

Pass marks: 44

1. Mixture can be separated into \_\_\_\_\_ using appropriate separation techniques.
2. A solution is a \_\_\_\_\_ mixture of two or more substances.
3. The major component of a solution is called the \_\_\_\_\_, and minor the \_\_\_\_\_.
4. The concentration of a solution is the amount of solute present per unit \_\_\_\_\_ or per unit \_\_\_\_\_ of the solution.
5. Material that are insoluble in a solvent and have particles that are visible to naked eyes, form a \_\_\_\_\_.
6. A suspension is a \_\_\_\_\_ mixture.
7. \_\_\_\_\_ are heterogeneous mixtures in which the particle size is too small to be seen with the naked eye, but is big enough to \_\_\_\_\_ light.
8. Colloids are useful in \_\_\_\_\_ and \_\_\_\_\_.
9. In colloids the particles are called \_\_\_\_\_ and the medium in which they are distributed is called the \_\_\_\_\_.
10. Pure substances can be \_\_\_\_\_ or \_\_\_\_\_.
11. A Compound is a substance composed of \_\_\_\_\_ and chemically combined in a \_\_\_\_\_.
12. Properties of a \_\_\_\_\_ are different from its constituent elements, whereas a \_\_\_\_\_ shows the properties of its constituting elements or compounds.
13. Pure Substance has the \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ at a give temperature and pressure.
14. A pure substance can be either an \_\_\_\_\_ or a \_\_\_\_\_.
15. During a Chemical reaction, \_\_\_\_\_ remains unchanged and this is known as \_\_\_\_\_.
16. In a pure chemical compound, elements are always present in a \_\_\_\_\_ and this is known as the Law of \_\_\_\_\_.
17. An \_\_\_\_\_ is the smallest particle of the element
- 17(a) \_\_\_\_\_ cannot usually exist independently.
- 17(b) Atom retains all \_\_\_\_\_ of element.
18. A \_\_\_\_\_ is the smallest particle of an element or a compound.
- 18(a) \_\_\_\_\_ is capable of independent existence under ordinary conditions.
19. \_\_\_\_\_ shows all the properties of the substance.
20. A Chemical formula of a compound shows \_\_\_\_\_ and \_\_\_\_\_.
21. Cluster of atoms that act as an ion are called \_\_\_\_\_.
- 21(a) Polyatomic ions carry \_\_\_\_\_ on them.
22. The chemical formula of a molecular compound is determined by the \_\_\_\_\_ of each element.
23. In ionic compounds, the \_\_\_\_\_ on each ion is used to determine the chemical formula of the compound.
24. Scientists use the \_\_\_\_\_ to compare the masses of different atoms of elements.
25. Atoms of Carbon-12 isotopes are assigned a relative atomic mass of \_\_\_\_\_.

26. The Avogadro constant is \_\_\_\_\_.
- 26(a) The Avogadro constant is defined as the number of atoms in exactly \_\_\_\_\_.
27. The \_\_\_\_\_ is the amount of substance that contains the same number of particles (atoms/ ions/ molecules/ formula units etc.) as there are atoms in exactly 12 g of carbon-12.
- 27(a) Mole of a substance contains \_\_\_\_\_ no. of atoms, molecules or ions.
28. Mass of one mole of a substance expressed in gms is called its \_\_\_\_\_.
29. \_\_\_\_\_ is a form of matter that cannot be broken down by chemical reactions into simpler substances.
30. A mixture is formed when two or more substances are mixed in \_\_\_\_\_.
31. If the mixture has a uniform composition thorough out than it is called a \_\_\_\_\_ mixture.
32. If the mixture has physically distinct part and has non-uniform compositions, then it is called \_\_\_\_\_ mixture.
33. Sugar in water is a \_\_\_\_\_.
34. Alloy of Copper and Zinc is a \_\_\_\_\_.
35. Ethyl alcohol in water is a \_\_\_\_\_.
36. When solids are dispersed in liquids to form a Heterogeneous mixture or an opaque medium, it is called \_\_\_\_\_.
37. Mass percentage of solution is \_\_\_\_\_.
38. Volume percentage of solution is \_\_\_\_\_.
39. A true solution is a \_\_\_\_\_, colloidal solution \_\_\_\_\_ and suspension is \_\_\_\_\_.
40. Size of solute in true solution is \_\_\_\_\_.
41. Size of solute in colloidal solution is \_\_\_\_\_.
42. Size of solute in suspension is \_\_\_\_\_.
43. According to \_\_\_\_\_ theory, elements or compounds are made up of small particles, atoms or molecule.
44. \_\_\_\_\_ is the smallest particle of an element.
45. Atom retains <sup>its</sup> \_\_\_\_\_ through <sup>out</sup> all physical and chemical change.
46. \_\_\_\_\_ is a group of two or more atoms chemically bonded together.
47. \_\_\_\_\_ is smallest part of element or compound.
48. \_\_\_\_\_ is a charged particle.
49. The combining capacity of an element is known as \_\_\_\_\_.
50. The relative masses of atoms are given in \_\_\_\_\_.

**BALABHADRA SKILL DEVELOPMENT ACADEMY**  
**SCIENCE QUESTION BANK – 8 (ANSWER)**

1. pure substances
2. homogeneous
3. solvent, solute
4. volume, mass
5. suspension
6. heterogeneous
7. Colloids, scatter
8. industry, daily life
9. dispersed phase, dispersion medium
10. elements or compounds
11. two or more different types of elements, fixed proportion
12. compound, mixture
13. same colour, composition, taste, texture
14. element ~~or~~ compound
15. sum of masses of reactants and products, law of conservation of masses
16. Definite Proportion by mass, Definite Proportions
17. atom
- 17(a) atom <sup>17(b)</sup> chemical properties
18. molecule
- 18(a) molecule
19. molecule
20. constituent elements, number of atoms of each combining element
21. polyatomic ions
- 21(a) fixed charge
22. valency
23. charge
24. relative atomic mass scale
25. 12
- 25(a) a carbon-12 atom
26.  $6.022 \times 10^{23}$
- 26(a) 12g of carbon-12 atom
27. mole
- 27(a)  $6.022 \times 10^{23}$
28. molar mass
29. Element
30. any proportion without any chemical change
31. Homogeneous
32. Heterogeneous
33. Homogeneous mixture
34. Homogeneous mixture
35. Homogeneous mixture
36. Suspension
37.  $\left( \frac{\text{Mass of solute}}{\text{Mass of Solution}} \right) \times 100$
38.  $\left( \frac{\text{Mass of solute}}{\text{Volume of Solution}} \right) \times 100$

- 39. Homogeneous mixture, appears to be Homogeneous, but Heterogeneous mixture, Heterogeneous mixture
- 40. less than  $10^{-8}$  cm
- 41. between  $10^{-7}$  to  $10^{-5}$  cm
- 42. Larger than  $10^{-5}$  cm
- 43. Daltons atomic theory
- 44. Atom
- 45. Identity
- 46. Molecule
- 47. Molecule
- 48. Ion
- 49. Valency
- 50. atomic mass unit