1. In a chemical reaction, total mass is:
   A. Increased
   B. Decreased
   C. Conserved
   D. Doubled (C)

Explanation : By the law of conservation of mass, total mass remains the same.

2. 5.3 g sodium carbonate + 6 g acetic acid gives total mass:
   A. 10.3 g
   B. 11.3 g
   C. 12.3 g
   D. 13.3 g (B)

Explanation : 5.3 g + 6 g = 11.3 g.

3. If H and O combine in 1:8 ratio, then 3 g H needs:
   A. 8 g O
   B. 16 g O
   C. 24 g O
   D. 32 g O (C)

Explanation : 3 × 8 = 24 g oxygen.

4. Dalton's postulate linked to conservation of mass is:
   A. Atoms are visible
   B. Atoms cannot be created or destroyed
   C. Atoms are colourless
   D. Atoms have no mass (B)

Explanation : This explains why mass remains conserved in reactions.

5. Law of definite proportions means compounds have:
   A. Random atoms
   B. Fixed ratio of atoms
   C. Only one atom
   D. No chemical formula (B)

Explanation : A compound has a fixed relative number and kind of atoms.

6. 1 atomic mass unit is:
   A. Mass of 1 H atom
   B. 1/12 mass of carbon-12 atom
   C. 1/16 mass of oxygen atom
   D. Mass of 1 electron (B)

Explanation : 1 u is defined as one-twelfth the mass of one carbon-12 atom.

7. Atom cannot be seen with naked eye because it is:
   A. Colourless
   B. Heavy
   C. Too small
   D. Unstable (C)

Explanation : Atoms are extremely small in size.

8. Formula of sodium oxide is:
   A. NaO
   B. Na_2O
   C. NaO_2
   D. Na_2O_2 (B)

Explanation : Sodium valency is 1 and oxygen valency is 2, so formula is Na_2O.

9. Formula of magnesium hydroxide is:
   A. MgOH
   B. $Mg(OH)_2$
   C. Mg_2OH
   D. MgH_2O (B)

Explanation : Magnesium combines with two hydroxide ions.

10. Chemical formula is a:
   A. Diagram
   B. Symbolic representation of composition
   C. Physical property
   D. Type of reaction (B)

Explanation : It shows the elements present and their ratio in a compound.