Atoms and Molecules Theory Test

1. What is Dalton's atomic theory? Write any two limitations.

2. Differentiate between molecule of element and molecule of compound.

3. Define amu

4. Which elements were used to measure atomic mass before C.

5. What is the difference between 2O and O_2.

6. What is the formula unit mass of NaCl.

7. What is polyatomic ion? Give example.

8. Differentiate between ions and atoms.

9. What is the law of constant proportion? Who proposed it? Give one example.

10. Find atomicity of $3H_2SO_4$, PO_4^{-3}

11. Find the molecular mass of the followings

    a) $K_4[Fe(CN)_6]$ b) $Al_2(SO_4)_3$ c) $C_{12}H_{22}O_{11}$ d) $30HCl$ e) C_{60}

12. Give examples

    a) Monovalent cation

    b) Divalent anion

    c) Polyatomic element

    d) Polyatomic molecule

    e) Polyatomic ion

13. 4.90 gm potassium chlorate when heated produced 1.92 gm of oxygen and the residue KCl left behind weighed 2.96gm. show that these results illustrate the law of conservation of mass.

14. Calculate the mass of carbon present in 2 gm of CO_2.

15. Write down the formula of

    a) Calcium carbonate

    b) Nitric acid

    c) Sulphur di oxide

    d) Sodium nitrite

16. The valency of an element is 2. Write down the formula of it with oxide and nitrate

17. What is conservation of mass. write an activity to show it. Who proposed it?

18. Copper oxide was prepared by two different methods. In one case 1.75 gm of the metal gave 2.19 gm of oxide. In the second case 1.14 gm of the metal gave 2.19 gm of oxide. In the second case 1.14 gm of the oxide, show that the given data illustrate the law of constant proportions.

19. Who suggested modern symbols of elements?

20. What is valency? What are two types of valency? Give examples.