**Pragati Education**

Question 1 to 21 each carries 1 mark.22 to 30 each carries 2 mark.

Molecular mass N-14,C-12,O-16,H-1,S-32

1.S oda water is a solution of carbon-dioxide in water.

What is this solution composed of?

(a) Liquid solute in a gaseous solvent

(b) Gaseous solute in a liquid solvent

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(c) Liquid solute in a liquid solvent

(d) Gas in suspended form in liquid

2. The smell of perfume gradually spreads across a room due to .....

3. Latent heat of fusion is the amount of heat energy

required to change 1 kg of solid into liquid at its .....

4. Assertion : When a beam of light is passed through a colloidal solution placed in a dark place the path of the beam becomes visible.

Reason : Light gets scattered by the colloidal particles.

5. Assertion : A solution of table salt in a glass of water is homogeneous.

Reason : A solution having different composition throughout is homogeneous.

6. Assertion : Tyndall effect is an optical property.

Reason : Electrophoresis is an electrical property.

7. Assertion : Isotopes of an element show different valencies.

Reason : Isotopes have different atomic numbers.

8. Assertion : For noble gases, valency is zero.Reason : Noble gases have 8 valence electrons.

9. Assertion : Cathode rays travel in straight lines.

Reason : Cathode rays do not penetrate through thin sheets.

10. Assertion : Isobars are identical in chemical properties.

Reason : Isobars have same atomic number.

11. Assertion : In Rutherford's gold foil experiment, very

few a -particles are deflected back. Reason : Nucleus present inside the atom is heavy.

12. A sample of pure water, irrespective of its source

contains 11.1% hydrogen and 88.9% oxygen. The data

supports(a) law of constant proportions(b) law of conservation of mass

(c) law of reciprocal proportions(d) law of multiple proportions

13. Identify the correct statements.

1. In a compound such as water, the ratio of the mass of hydrogen to the mass of oxygen is always 8:1.

2. If 9 g of water is decomposed, 1 g of hydrogen and 8 g of oxygen are always obtained.

3. In ammonia, nitrogen and hydrogen are always present in the ratio 3 1: 4 by mass.

4. Many compounds are composed of two or more elements and each such compound has the same elements in the same proportions.

(a) 1 and 3 (b) 1, 2 and 3(c) 2 and 4 (d) All of these

14. The valency of nitrogen in ammonia ^ h NH3 is (a) 2 (b) 0 (c) 3 (d) 4

15. The molecular formula P O2 5 means that

(a) a molecule contains 2 atoms of P and 5 atoms of O

(b) the ratio of the mass of P to the mass of O in the molecule is 2 : 5

(c) there are twice as many P atoms in the molecule as there are O atoms

(d) the ratio of the mass of P to the mass of O in the molecule is 5 : 2.

16. Chemical formula of ferric oxide is

(a) FeO (b) Fe O2 3 (c) Fe O3 4 (d) none of these

17. Assertion : One atomic mass unit (amu) is mass of

an atom equal to exactly one-twelfth the mass of a

carbon-12 atom.

Reason : Carbon-12 isotope was selected as standard.

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18. The increase in food grain production after the

introduction of improved varieties of crops is often

referred as .....(a) White Revolution (b) Green Revolution

(c) Yellow Revolution (d) Blue Revolution

19. The minerals required by a plant in very small

quantities are calledm a)(b) micronutrients (c) manures (d) fertilizers

20. Which of the following method includes cross-breeding

of genetically dissimilar organisms?

(a) Hybridization (b) Selection

(c) Introduction (d) Breeding

21. Assertion : Proper cleaning for cows and buffaloes is

required.

Reason : Proper cleaning maintains the health of

animals and also helps in clean milk production.

22. To make a saturated solution,36 g of sodium chloride is dissolved in 100 g of water at293 K. Find its concentration at this temperature.

23. A solution contains 60g of NaCl in 400g of water. Calculate the concentration in term of mass by mass percentage of the solution.

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24. Write down the formulae of

(i) sodium oxide (ii) aluminium chloride (iii) sodium suphide (iv) magnesium hydroxide

25. Calculate the molecular Mass of

a) Ammonium sulphate NH4(SO4)2. B) Penicillin C16H18N2SO4

26. What are the limitations of Rutherford's model of the atom?

27. If bromine atom is available in the form of, say, two isotopes 79Br35 (49.7%) And 81Br35, (50.3%)Calculate the average atomic mass of bromine atom.

28. How will you find the valency of chlorine, sulphur and magnesium?

**6. Complete the following table.**

| Atomic number | Mass number | Number of neutrons | Number of protons | Number of electrons | Name of the atomic species |
|---|---|---|---|---|---|
| 9 | - | 10 | - | - | - |
| 16 | 32 | - | - | - | Sulphur |
| - | 24 | - | 12 | - | - |
| - | 2 | - | 1 | - | - |
| - | 1 | 0 | 1 | 0 | - |

29.

30.Define photoperiod , micronutrients and macronutrients and give example.