

# IIITH PGEE Chemistry Previous Year Question Paper PDF

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1). Solutions are classified into aqueous and non-aqueous solutions, based on\_\_\_\_\_.

- a) Nature of solute particles
- b) Nature of solvent
- c) Size of the particles
- d) Thickness of solvent

**Answer is: b)**

2). The solvent used to prepare aqueous solutions is\_\_\_\_\_.

- a) Water
- b) benzene
- c) kerosene
- d) petrol

**Answer is: a)**

3). A true solution does not show Tyndall effect, because of the\_\_\_\_\_.

- a) Nature of solvent
- b) Amount of solute
- c) Size of the particles
- d) Nature of solute

**Answer is: c)**

4). Tyndall effect is exhibited by\_\_\_\_\_.

- a) True solutions
- b) Suspensions
- c) Colloidal solutions
- d) Crystals

**Answer is: c)**

5). Tyndall effect is produced by\_\_\_\_\_.

- a) True solutions of light

- b) Scattering of light
- c) Refraction of light
- d) Movement of particles

**Answer is: b)**

6). The particle size in a colloidal solution is\_\_\_\_\_.

- a)  $1 \text{ \AA} - 10 \text{ \AA}$
- b)  $10 \text{ \AA} - 2000 \text{ \AA}$
- c) More than  $2000 \text{ \AA}$
- d) Less than  $1 \text{ \AA}$

**Answer is: b)**

7). The particle size in a suspension is\_\_\_\_\_.

- a)  $1 \text{ \AA} - 10 \text{ \AA}$
- b)  $10 \text{ \AA} - 2000 \text{ \AA}$
- c) More than  $2000 \text{ \AA}$
- d) Less than  $1 \text{ \AA}$

**Answer is: c)**

8). A solution which has more of solute, at a given temperature than that of saturated solution is called a\_.

- a) Super saturated solution
- b) Unsaturated solution
- c) Colloidal solution
- d) suspension

**Answer is: a)**

9). Chalk powder in water is an example of\_\_\_\_\_.

- a) Saturated solution
- b) Unsaturated solution
- c) suspension

d) Colloidal solution

**Answer is: c)**

10). The particle size of the solute in true solution is\_\_\_\_\_.

- a) 1 Å – 10 Å
- b) 10 Å - 100 Å
- c) 100 Å - 1000 Å
- d) More than 1000 Å

**Answer is: a)**

11). Milk is a\_\_\_\_\_.

- a) True solution
- b) Colloidal solution
- c) suspension
- d) saturated solution

**Answer is: b)**

12). Nitrogen in soil is an example for\_\_\_\_\_.

- a) True solution
- b) saturated
- c) super saturated
- d) unsaturated

**Answer is: b)**

13). Fog is a solution of\_\_\_\_\_.

- a) Liquid in gas
- b) Gas in liquid
- c) Solid in gas
- d) Gas in gas

**Answer is: a)**

14).Soda water is a solution of\_\_\_\_\_.

- a) Liquid in gas
- b) Gas in liquid
- c) Solid in gas
- d) Gas in gas

**Answer is:b**

15).Blood is an example of\_\_\_\_\_.

- a) True solution
- b) Colloidal solution
- c) Saturated solution
- d) Suspension

**Answer is: b)**

16).The dispersed phase in a colloidal solution is\_\_\_\_\_.

- a) Solute
- b) Solution
- c) Suspension
- d) Mixture

**Answer is: a)**

17).Sugar and Salt solutions are\_\_\_\_\_.

- a) Heterogeneous mixtures
- b) True solutions
- c) Colloidal solutions
- d) Suspensions

**Answer is: b)**

18).Brownian movement explains the\_\_\_\_\_property of colloidal solutions.

- a) optical

- b) electrical
- c) kinetic
- d) mechanical

**Answer is: c)**

19). In aqueous solutions, the solvent used is\_\_\_\_\_.

- a) benzene
- b) ether
- c) alcohol
- d) water

**Answer is: d)**

20). The solution in which saturation is not achieved is called\_\_\_\_\_.

- a) Super saturated
- b) Unsaturated
- c) Saturated
- d) Suspended

**Answer is: b)**

21). Cheese is a colloidal solution of\_\_\_\_\_.

- a) Solid in solid
- b) Liquid in solid
- c) Solid in liquid
- d) Gas in solid

**Answer is: b)**

22). Cork is a colloid of\_\_\_\_\_.

- a) Solid in solid
- b) Liquid in solid
- c) Solid in liquid
- d) Gas in solid

**Answer is: d)**

23). Smoke is a colloid of\_\_\_\_\_.

- a) Solid in solid
- b) Liquid in solid
- c) Solid in liquid
- d) Solid in Gas

**Answer is:d)**

24).The saturation temperature for 20.7g of  $\text{CuSO}_4$  soluble in water is\_\_\_\_\_.

- a)  $10^{\circ}\text{C}$
- b)  $100^{\circ}\text{C}$
- c)  $20^{\circ}\text{C}$
- d)  $30^{\circ}\text{C}$

**Answeris:c)**

25).The solubility level of an aqueous solution of  $\text{NaCl}$  at  $25^{\circ}\text{C}$  is\_\_\_\_\_.

- a) 20g
- b) 36g
- c) 95g
- d) 8g

**Answeris:b)**

26).The increase in the solubility of Sodium halides, in water at  $25^{\circ}\text{C}$  is\_\_\_\_\_/

- a)  $\text{NaCl} > \text{NaBr} > \text{NaI}$
- b)  $\text{NaBr} > \text{NaI} > \text{NaCl}$
- c)  $\text{NaI} > \text{NaBr} > \text{NaCl}$
- d)  $\text{NaCl} = \text{NaBr} > \text{NaI}$

**Answer is:c)**

27).Solubility of  $\text{CaO}$  in water is a\_\_\_\_\_.

- a) Chermic
- b) endothermic
- c) exothermic
- d) hypothermic

**Answer is:c)**

28).According to Henry's Law, in gases, an increase in pressure increase\_\_\_\_\_.

- a) Solubility
- b) saturation
- c) volume
- d) viscosity

**Answeris: a)**

29).Deep sea divers use mixture of\_\_\_\_\_.

- a) Helium - Oxygen
- b) Nitrogen - Oxygen
- c) Hydrogen - Nitrogen
- d) Helium - Nitrogen

**Answer is:a)**

30).The continuous random motion of colloidal particles is called\_\_\_\_\_.

- a) Brownian movement
- b) Zig zag movement
- c) Continuous movement
- d) Tyndall effect

**Answer is:a)**

31).On increasing the temperature, the solubility of the solute in the solvent\_\_\_\_\_.

- a) Increase
- b) Decrease
- c) Change
- d) Does not change

**Answer is: a)**

32).Which law relates solubility of solvents with pressure?

- a) Hess' law
- b) Henry's law
- c) Charles' Law
- d) Boyle's law

**Answer is: b)**

33).When sunlight passes through the window of your house, the dust particles scatter the light making the path of the light visible. This phenomenon is called as\_\_\_\_\_.

- a) Brownian motion
- b) Tyndall effect
- c) Raman effect
- d) Uniform motion

**Answer is: b)**

34).The Greek term 'atomos' means\_\_\_\_\_.

- a) divisible
- b) indivisible
- c) macro molecule
- d) soft sphere

**Answer is:b**

35).Isotopes are the atoms of same element, with same atomic number. But with different.

- a) Atomic number
- b) Mass number
- c) Number of electrons
- d) Chemical nature

**Answer is: b)**

36). ${}_6\text{C}^{12}$  and  ${}_6\text{C}^{14}$  are\_\_\_\_\_.

- a) Isotopes
- b) Isobars
- c) Isomers
- d) Molecules

**Answer is: a)**



37).Atoms of different elements possessing in the same atomic mass are called

\_\_\_\_\_.

- a) Isotopes
- b) Isobars
- c) Isomers
- d) Molecules

**Answer is: c)**

38).Atoms of different elements with same number of neutrons.

- a) Isotopes
- b) Isomers
- c) Isobars
- d) Isotones

**Answer is: d)**

39).Atomicity of oxygen in ozone molecule is\_\_\_\_\_.

- a) 1
- b) 2
- c) 3
- d) 4

**Answer is: c)**

40).Atomicity of primary gases is\_\_\_\_\_.

- a) 1
- b) 2
- c) 3
- d) 4

**Answer is: b)**

41).In the Beginning of the 20<sup>th</sup> century, Matter Wave concept was introduced by

\_\_\_\_\_.

- a) Broglie
- b) Avogadro
- c) Heisenberg
- d) Einstein

**Answer is: a)**

42).The Principle of Uncertainty was introduced by\_\_\_\_\_.

- a) Broglie
- b) Avogadro
- c) Heisenberg
- d) Einstein

**Answer is: c)**

43). ${}_{18}\text{Ar}^{40}$  and  ${}_{20}\text{Ca}^{40}$  are considered as\_\_\_\_\_.

- a) Isotopes
- b) Isomers
- c) Isobars
- d) Isotones

**Answer is: a)**

44).The compound which does not show simple ratio of atoms, is\_\_\_\_\_.

- a) Benzene
- b) Acetylene
- c) Hydrogen
- d) Sucrose

**Answer is: d)**

45).Avogadro's hypothesis relates volume of gases and\_\_\_\_\_.

- a) mass
- b) temperature

- c) pressure
- d) number of molecules

**Answer is: d)**

46).Atomicity of an element is\_\_\_\_\_.

- a) Valency of an element
- b) Atomic mass
- c) Number of atoms in one molecule of an element
- d) Isotope of an element

**Answer is: c)**

47).Atomicity is given by\_\_\_\_\_.

- a) Mass/molecular mass
- b) Mass of the element
- c) Molecular mass X atomic mass
- d) Molecular mass / atomic mass

**Answer is: d)**

48).The atoms of  ${}_6\text{C}^{13}$  and  ${}_7\text{N}^{14}$  are considered as\_\_\_\_\_.

- a) Isotopes
- b) Isomers
- c) Isobars
- d) Isotones

**Answer is: d)**

49).Isotones are the atoms of different elements having\_\_\_\_\_.

- a) Same mass number
- b) Same atomic number
- c) Same number of neutrons
- d) Same number of electrons

**Answer is: c)**

50).Atomicity of Phosphorous is\_\_\_\_\_.

- a) 2
- b) 3
- c) 4
- d) 5

**Answer is: c)**