

Rajasthan JET 2023 Chemistry

1. Heating a mixture of sodium benzoate and soda lime gives
Ans – Benzene
2. Under ideal climatic conditions, how many centimetres of soil is developed?
Ans – 1 Cm
3. The reaction of carboxylic acids with alcohols, catalysed by conc. H_2SO_4 is called
Ans – Esterification
4. Which of the following is not colloid?
Ans – Chlorophyll
5. The law of mass action was proposed by
Ans – Guldberg and Waage
6. Hydrogen Bonding is maximum in
Ans – Ethanol
7. 2p orbital have –
Ans – $n=2, l=1$
8. Which instrument is used for the estimation of Potash (K)?
Ans - Flame photometer
9. The commercial name of poly-acrylonitrile is-
Ans – Orlon (Acrilan)
10. Which of the following is not used as biofertilizer?
Ans – Algae
11. An element of atomic number 24 belongs to –
Ans – d block
12. The hybridisation of carbon atoms in alkanes is –
Ans – sp^3
13. If it is a cyclic process, the change in internal energy of the system is –
Ans – Zero
14. Which one is the most stable carbonate?
Ans – $BaCO_3$
15. Which of the following oxides is amphoteric?

Ans – BeO

16. Which of the following membrane separation technique would be most suitable for concentration of milk proteins in dairy industry?

Ans – Ultra filtration

17. Which of the following is strongest Bronsted base?

Ans – ClO^-

18. Which of the following is the most electron negative elements?

Ans – C

19. Plaster of Paris (POP) is

Ans - $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$

20. Which of the following shows least paramagnetic property?

Ans – Cu

21. When ethyl chloride reacts with nascent hydrogen, what is the product formed?

Ans – Ethane

22. When water is added to quick lime the reaction is –

Ans – Exothermic

23. The rate of reaction does not depend upon -

Ans – Concentration

24. Which of the following polymers are thermoplastic?

Ans – Polystyrene

25. Which molecule is planar?

Ans – XeF_4

26. Which clay mineral is responsible for cracking in black soil?

Ans – montmorillonite

27. Give the IUPAC number of this compound: $\text{CH}_3\text{OCH}_2\text{CH}_3$

Ans – Methoxy Ethane

28. Apatite is a group of minerals which mainly contains

Ans- Phosphorus

29. In a given atom, no 2 electrons can have the same values for all the four quantum numbers.

This is called –

Ans – Pauli's Exclusion Principle

For the Photochemical reaction

$\text{H}_2(\text{g}) + \text{Cl}_2(\text{g}) \xrightarrow{h\nu} 2\text{HCl}(\text{g})$, the order of reaction is-

- (1) Zero order
- (2) First order
- (3) Second order
- (4) Third order

30.

Ans – Zero Order

31. Which of the following bonds has the highest average bond?

Ans - $\text{N}\equiv\text{N}$

32. Which of the following compound is expected to be coloured?

Ans - CuF_2

33. For an endothermic reaction, where ΔH represents the enthalpy of reaction, the minimum value for the energy of activation will be –

Ans – More than ΔH

34. Which food additive is used a flavor enhancer in products such as soups and snacks?

Ans – Monosodium glutamate

35. Which of the following nutrients is cycled in the soil through atmosphere?

Ans – Nitrogen

36. When a carbonate ore is heated strongly in absence of air to convert into metal oxide, the process is called

Ans – Calcination

37. Why does Zinc not show variable valency?

Ans – Complete 'd' subshell

38. Oxidation number of Carbon in CH_2O is

Ans – Zero