



www.zigya.com

Previous Year Paper

Chemistry - 2002



Multiple Choice Questions

1. An example of a salt that will not hydrolyse is

- A. $\text{CH}_3\text{COONH}_4$
- B. CH_3COOK
- C. NH_4Cl
- D. KCl

Answer

2. van der Waal's equation for n moles of a gas is

- A. $P + \frac{n^2a}{V^2}(V - nb) = RT$
- B. $P + \frac{na}{V^2}(V - nb) = RT$
- C. $P + \frac{a}{V^2}(V - b) = RT$
- D. $P + \frac{n^2a}{V^2}(V - b) = RT$

Answer

3. Smallest among these species is

- A. lithium
- B. lithium ion
- C. hydrogen
- D. helium

Answer

4. Covalent compounds have low melting point because

- A. covalent molecules are held by weak van der Waal's force of attraction
- B. covalent bond is less exothermic
- C. covalent bond is weaker than ionic bond
- D. covalent molecules have definite shape

Answer

5. Which one of the following statements is true?

- A. ΔE is always greater than ΔH
- B. ΔE is always less than ΔH
- C. ΔE may be lesser or greater or equal to ΔH
- D. ΔE is always proportional to ΔH

Answer

6. For a f -orbital, the values of m are

- A. $-1, 0, +1$

D. -3, -2, -1, 0, +1, +2, +3

Study, Assignments, Solved Previous Year Papers . Questions and Answers. Free Forever.

Answer

7. Chloride ion and potassium ion are isoelectronic. Then

- A. potassium ion is relatively bigger
- B. depends on the other cation and anion
- C. their size are same
- D. chloride ion is bigger than potassium ion

Answer

8. Aqueous solutions of hydrogen sulphide and sulphur dioxide when mixed together, yield

- A. sulphur trioxide and water
- B. hydrogen and sulphurous acid
- C. sulphur and water
- D. hydrogen peroxide and sulphur

Answer

9. The intensive property among these quantities is

- A. enthalpy
- B. mass/ volume
- C. mass
- D. volume

Answer

10. 30g of Mg and 30g of oxygen are reacted and the residual mixture contains

- A. 45 g of MgO and 15 g of O₂
- B. 50 g of MgO and 10 g of O₂
- C. 60 g of MgO only
- D. 40 g of MgO and 20 g of O₂

Answer

11. 3 g of oxide of a metal is converted to chloride completely and it yielded 5 g of chloride. The equivalent weight of metal is

- A. 12
- B. 20
- C. 33.25
- D. 2.325

Answer

12. 20 mL of 0.25 N strong acid and 30 mL 0.2 N of strong base are mixed; the resulting solution is

- A. 0.02 N acidic
- B. 0.025 N basic
- C. 0.02 N basic

D. 0.025 N acidic

Like. Share. Bookmark. Download. Make Notes. Print - Your Favourite Questions. Join www.zigya.com

13. The rate of forward reaction is two times that of reverse reaction at a given temperature and identical concentration. K

- A. 2.5
- B. 2.0
- C. 0.5
- D. 1.5

Answer

14. Ammonium ion is

- A. neither an acid nor base
- B. both an acid and a base
- C. a conjugate acid
- D. a conjugate base

Answer

15. A is an aqueous acid; B is an aqueous base. They are diluted separately, then

- A. pH of A decreases and pH of B increases
- B. pH of A increases and pH of B decreases till pH in each case is 7
- C. pH of A and B increase
- D. pH of B and A decrease

Answer

16. ${}_Z\text{X}^M + {}_2\text{He}^4 \rightarrow {}_{15}\text{P}^{30} + {}_n\text{H}^1$. Then

- A. Z = 12, M = 27
- B. Z = 13, M = 27
- C. Z = 12, M = 17
- D. Z = 13, M = 28

Answer

17. Compounds with high heat of formation are less stable because

- A. high temperature is required to synthesise them
- B. molecules of such compounds are distorted
- C. it is difficult to synthesise them
- D. energy rich state leads to instability

Answer

18. Heat of neutralisation of weak acid and strong base is less than the heat of neutralisation of strong acid and strong base due to

- A. energy has to be spent for the total dissociation of weak acid
- B. salt of weak acid and strong base is not stable
- C. incomplete dissociation of weak acid
- D. incomplete neutralisation of weak acid

Answer

Like. Share. Bookmark. Download. Make Notes. Print - Your Favourite Questions. Join www.zigya.com

A. gamma and alpha rays simultaneously

Study Assignments, Solved Previous Year Papers . Questions and Answers. Free Forever.

B. gamma rays only

C. alpha and beta rays simultaneously

D. beta and gamma rays simultaneously

Answer

20. Chemical bond implies

A. attraction and repulsion

B. attraction and repulsion balanced at a particular distance

C. attraction

D. repulsion

Answer

21. A lone pair of electrons in an atom implies

A. a pair of valence electrons not involved in bonding

B. a pair of electrons involved in bonding

C. a pair of electrons

D. a pair of valence electrons

Answer

22. C^{14} is

A. a natural non-radioactive isotope

B. an artificial non-radioactive isotope

C. an artificial radioactive isotope

D. a natural radioactive isotope

Answer

23. A cuprous ore among the following is

A. cuprite

B. malachite

C. chalcopyrites

D. azurite

Answer

24. A neutral fertiliser among these compounds is

A. ammonium nitrate

B. urea

C. CAN

D. ammonium sulphate

Answer

25. Drying soil invariably contains

A. butyric acid

B. stearic acid

Like. Share. Bookmark. Download. Make Notes. Print - Your Favourite Questions. Join www.zigya.com

D. linoleic acid

Study, Assignments, Solved Previous Year Papers . Questions and Answers. Free Forever.

Answer

26. Aluminium oxide is not reduced by chemical reactions since

- A. reducing agent contaminate
- B. the process pollute the environment
- C. aluminium oxide is highly stable
- D. aluminium oxide is reactive

Answer

27. A salt producing hydrocarbon among these compounds is

- A. ethane
- B. methane
- C. ethene
- D. ethyne

Answer

28. Octane number is zero for

- A. *n*-octane
- B. *iso*-octane
- C. *n*-heptane
- D. *iso*-heptane

Answer

29. Water is a

- A. amphoteric acid
- B. aprotic solvent
- C. protophobic solvent
- D. protophilic solvent

Answer

30. Bio gas production is more useful when compared to the direct use of dung because

- A. both fuel value and fertiliser value are effectively utilised
- B. production of bio gas involves less labour
- C. fuel is quickly produced
- D. the fertiliser produced is a fluid

Answer

31. The simplest way to check whether a system is colloidal is by

- A. electrodialysis
- B. finding out particle size
- C. Tyndall effect
- D. Brownian movement

Answer

32. An example for a strong electrolyte is

Like, Share, Bookmark, Download, Make Notes. Print - Your Favourite Questions. Join www.zigya.com

B. ammonium hydroxide

Study Assignments, Solved Previous Year Papers . Questions and Answers. Free Forever.

C. sugar

D. sodium acetate

Answer

33. Sodium chloride is an ionic compound where as hydrogen chloride gas is mainly covalent because

A. electronegativity difference in the case of hydrogen is less than 2.1

B. hydrogen chloride is a gas

C. hydrogen is a non-metal

D. sodium is reactive

Answer

34. Iron loses magnetic property at

A. melting point

B. 1000 K

C. Curie point

D. boiling point

Answer

35. An example for a double salt is

A. potassium ferricyanide

B. cobalt hexamine chloride

C. cuprous sulphate

D. Mohr's salt

Answer

36. The set of compounds in which the reactivity of halogen atom in the ascending order is

A. vinyl chloride, chloroethane, chlorobenzene

B. vinyl chloride, chlorobenzene, chloroethane

C. chloroethane, chlorobenzene, vinyl chloride

D. chlorobenzene, vinyl chloride, chloroethane

Answer

37. In the case of auto catalysis

A. product catalysis

B. solvent catalysis

C. reactant catalysis

D. heat produced in the reaction catalysis

Answer

38. Order of reaction is decided by

A. molecularity

B. pressure

C. temperature

Like, Share, Bookmark. Download. Make Notes. Print - Your Favourite Questions. Join www.zigya.com

Answer

Study, Assignments, Solved Previous Year Papers, Questions and Answers, Free Forever

39. Half-life of a reaction is found to be inversely proportional to the cube of initial concentration.

The order of reaction is

- A. 5
- B. 2
- C. 4
- D. 3

Answer

40. Which among the following statements is false?

- A. The adsorption may be monolayered or multilayered
- B. Particle size of adsorbent will not affect the amount of adsorption
- C. Increase of pressure increases amount of adsorption
- D. Increase of temperature may decrease the amount of adsorption

Answer

41. Pentavalence in phosphorous is more stable when compared to that of nitrogen even though they belong to same group is due to

- A. reactivity of phosphorous
- B. inert nature of nitrogen
- C. dissimilar electronic configuration
- D. larger size of phosphorous atom

Answer

42. A chemical reaction was carried out at 300 K and 280 K. The rate constants were found to be K_1 and K_2 respectively. Then

- A. $K_2 \approx 0.25 K_1$
- B. $K_2 \approx 0.5 K_1$
- C. $K_2 \approx 4 K_1$
- D. $K_2 \approx 2 K_1$

Answer

43. A smuggler could not carry gold by depositing iron on gold surface since

- A. gold has higher standard reduction potential than iron
- B. gold has lower standard reduction potential than iron
- C. gold is denser
- D. iron rusts

Answer

44. Kinetic theory of gases presumes that collision between the molecules to be perfectly elastic because

- A. collisions will not split the molecule

- B. the molecules are tiny

Like. Share. Bookmark. Download. Make Notes. Print - Your Favourite Questions. Join www.zigya.com

D. the temperature remains constant irrespective of collisions

Answer Study, Assignments, Solved Previous Year Papers . Questions and Answers. Free Forever.

45. In the case of a radio isotope the value of $T_{1/2}$ and λ are identical in magnitude. The value is

- A. 0.693
- B. $(0.693)^{1/2}$
- C. $1/0.693$
- D. $(0.693)^2$

Answer

46. Heat treatment alters the properties of steel due to

- A. chemical reaction on heating
- B. partial rusting
- C. change in the residual energy
- D. change in the lattice structure due to differential rate of cooling

Answer

47. Glacial acetic acid is obtained by

- A. chemically separating acetic acid
- B. treating vinegar with dehydrating agents
- C. crystallising, separating and melting acetic acid
- D. distilling vinegar

Answer

48. An organic acid without a carboxylic acid group is

- A. picric acid
- B. oxalic acid
- C. vinegar
- D. ascorbic acid

Answer

49. An ester used as medicine is

- A. ethyl benzoate
- B. methyl salicylate
- C. methyl acetate
- D. ethyl acetate

Answer

50. Reaction of aniline with benzaldehyde is

- A. polymerisation
- B. condensation
- C. addition
- D. substitution

Answer

Like. Share. Bookmark. Download. Make Notes. Print - Your Favourite Questions. Join www.zigya.com

51. Halothane in the presence of alcoholic KOH undergoes

- A. elimination
- B. polymerisation

- C. dimerisation
- D. substitution

Answer

52. A condensation polymer among the following polymers is

- A. teflon
- B. polystyrene
- C. PVC
- D. decron

Answer

53. A compound that undergoes bromination easily is

- A. toluene
- B. benzoic acid
- C. phenol
- D. benzene

Answer

54. A sugar that is not a disaccharide among the following is

- A. galactose
- B. lactose
- C. maltose
- D. sucrose

Answer

55. Heterocyclic amino acid among these compound is

- A. lysine
- B. tyrosine
- C. proline
- D. serine

Answer

56. Methanal is

- A. CH_3CHO
- B. CH_3COCH_3
- C. CH_2OH
- D. HCHO

Answer

57. Purine derivative among the following bases is

- A. cytosine
- B. guanine

Like. Share. Bookmark. Download. Make Notes. Print - Your Favourite Questions. Join www.zigya.com

D. thymine

Study, Assignments, Solved Previous Year Papers . Questions and Answers. Free Forever.

Answer

58. A drug that is antipyretic as well as analgesic is

- A. penicillin
- B. chloroquin
- C. *para*-acetamidophenol
- D. chlorpromazine hydrochloride

Answer

59. In a reversible reaction a catalyst will affect

- A. the rate of forward reaction and reverse reaction
- B. neither the forward reaction nor the rate of reverse reaction
- C. the rate of forward reaction
- D. the rate of reverse reaction

Answer

60. Grignard reagent is not prepared in aqueous medium but prepared in ether medium. Because

- A. the reagent reacts with water
- B. the reagent becomes inactive in water
- C. it is insoluble in water
- D. the reagent is highly reactive in water

Answer