



www.zigya.com

Previous Year Paper

Chemistry - 2002

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



Multiple Choice Questions

1. The first artificial disintegration of an atomic nucleus was achieved by

- A. Geiger
- B. Wilson
- C. Madam Curie
- D. Rutherford

Answer

2. Irrespective of the source, pure sample of water always yields 88.89% mass of oxygen and 11.11 % mass of hydrogen. This is explained by the law of;

- A. conservation of mass
- B. constant composition
- C. multiple proportion
- D. Gay-Lussa

Answer

3. When the product of pressure and volume is plotted against pressure for a given amount of gas, the line obtained is :

- A. parallel to X-axis
- B. parallel to Y-axis
- C. linear with positive slope
- D. linear with negative slope

Answer

4. 32g of O_2 , 2g of H_2 and 28g of N_2 at STP, occupy separately a volume of:

- A. 1L
- B. 2L
- C. 22.4L
- D. 2.24L

Answer

5. Air at sea level is dense. This is a practical implimentation of :

- A. Boyle's law
- B. Charles' law
- C. Avogadro's law
- D. Dalton's law

Answer

6. Acetylene molecule has carbon in sp hybridization. Like Share. Bookmark. Download. Make Notes. Print - Your Favourite Questions. Join www.zigya.com

B. sp^2 -hybridization

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

C. sp^3 hybridization

D. sp^3d -hybridization

Answer

7. Oxygen molecule contains :

- A. no unpaired electron
- B. one unpaired electron
- C. two unpaired electrons
- D. three unpaired electrons

Answer

8. The law of thermodynamics formulated by Dr.N. Nernst is :

- A. first law of thermodynamics
- B. second law of thermodynamics
- C. third law of thermodynamics
- D. both (a) and (b)

Answer

9. Which of the following will favour the reverse reaction in a chemical equilibrium ?

- A. Increasing the concentration of the reactants
- B. Removal of at least one of the products at regular intervals
- C. Increasing the concentration of one or more of the products
- D. Increasing the pressure

Answer

10. K_p and K_c are related as :

- A. $K_p = K_c(RT)^{\Delta n}$
- B. $K_p + K_c = (RT)^{\Delta n}$
- C. $K_c = K_p$
- D. $K_p . K_c = (RT)^{\Delta n}$

Answer

11. The pH of 0.005 M H_2SO_4 is :

- A. 2.5
- B. 1.5
- C. 1.0
- D. 2.0

Answer

12. Lassaigne's test is used to detect :

- A. nitrogen and halogens

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

Answer

13. The number of possible structural isomers of butene are:

- A. 3
- B. 2
- C. 4
- D. 1

Answer

14. Disymmetric object is one which is:

- A. superimposable on its mirror image
- B. non-superimposable on its mirror image
- C. optically inactive
- D. achiral

Answer

15. Cycloalkane has the formula :

- A. C_nH_{2n+2}
- B. C_nH_{2n-2}
- C. C_nH_{2n}
- D. $C_{2n}H_2$

Answer

16. Three fused benzene rings are found in:

- A. naphthalene
- B. anthracene
- C. phenanthroline
- D. triphenyl methane

Answer

17. To differentiate between carbon-12, carbon-13 and carbon-14, the instrument that you would use is :

- A. infra-red spectrometer
- B. atomic absorption spectrometer
- C. mass spectrometer
- D. ultraviolet spectrometer

Answer

18. A mixture of sand and iodine can be separated by:

- A. crystallisation
- B. sublimation

C. distillation

Answer

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

19. Pyrosilicate ion is

- A. SiO_2^{2-}
- B. $\text{Si}_2\text{O}_7^{6-}$
- C. SiO_4^{2-}
- D. SiO_3^{2-}

Answer

20. The effective component, of bleaching powder.....is the of calcium :

- A. Cl^-
- B. OCl^-
- C. O^{2-}
- D. O_2Cl^-

Answer

21. In the lime kiln, the reaction $\text{CaCO}_3(\text{s}) \rightarrow \text{CaO}(\text{s}) + \text{CO}_2(\text{g})$ goes to completion because:

- A. of high temperature
- B. CaO is more stable than CaCO_3
- C. CO_2 escapes simultaneously
- D. CO_2 is a gaseous product

Answer

22. The rate of a reaction is doubled for every 10° rise in temperature. The increase in reaction rate as a result of temperature rise from 10° to 100° is :

- A. 112
- B. 512
- C. 400
- D. 614

Answer

23. When a beam of light is passed through a colloidal solution it :

- A. is reflected
- B. is scattered
- C. transmitted
- D. absorbed

Answer

24. The electron affinity values for the halogens show the following trend :

- A. $\text{F} < \text{Cl} > \text{Br} > \text{I}$
- B. $\text{F} < \text{Cl} < \text{Br} < \text{I}$
- C. $\text{F} > \text{Cl} > \text{Br} > \text{I}$

D. $\text{F} < \text{Cl} > \text{Br} < \text{I}$ Like. Share. Bookmark. Download. Make Notes. Print - Your Favourite Questions. Join www.zigya.com

25. When H_2S gas is passed through nitric acid, the product is:

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

A. prismatic S (colloidal)

B. amorphous S

C. monoclinic S

D. plastic S

Answer

26. Atoms in a P_4 molecule of white phosphorus are arranged regularly in space in which of the following way ?

A. At the comers of tetrahedron

B. At the comers of a cube

C. At the comers of a four membered ring

D. At the centre and comers of a equivalent triangle

Answer

27. The catalytic activity of the transition metals and their compounds is described to :

A. their chemical reactivity

B. their magnetic behaviour

C. their unfilled d-orbitals

D. their ability to adopt multiple oxidation states and their complexing ability

Answer

28. The compound ZnFe_2O_4 is:

A. a normal spinel compound

B. a inverse spinel compound

C. interstitial compound

D. covalent compound

Answer

29. High purity Si and Ge for semiconductor properties can be obtained by :

A. calcination

B. roasting

C. zone refining

D. thermic process

Answer

30. Name of the alloy of aluminium which is used in aeroplane is :

A. duralumin

B. bell metal

C. aluminium bronze

D. alumina

Answer

31. Invar, an alloy of Fe and Ni is used in watches and meter scale. Its characteristic property is Like. Share. Bookmark. Download. Make Notes. Print - Your Favourite Questions. Join www.zigya.com

A. small coefficient of expansion

B. resistance of corrosion

C. hardness and elasticity

D. magnetic nature

Answer

32. An alloy of Pb and Sn in equal proportion is called:

A. solder

B. constantan

C. gun metal

D. type metal

Answer

33. Aqua-regia is obtained by mixing two different acids in the ratio :

A. $1\text{HNO}_3 : 3\text{HCl}$ B. $2\text{HNO}_3 : 2\text{HCl}$ C. $1\text{HNO}_3 : 2\text{HCl}$ D. $3\text{HNO}_3 : 1\text{HCl}$

Answer

34. A compound with cubic structure is made of elements A and B. A atoms are at the corners of the cube and B atoms are at the face centres. The simplest formula of the compound is :

A. A_5B B. AB_3

C. AB

D. AB_6

Answer

35. Colligative properties are used for the determination of :

A. molar mass

B. equivalent weight

C. arrangement of molecules

D. melting point and boiling point

Answer

36. Identify the mixture that shows positive deviation from Raoult's law :

A. $\text{CHCl}_3 + (\text{CH}_3)_2\text{CO}$ B. $(\text{CH}_3)_2\text{CO} + \text{C}_6\text{H}_5\text{NH}$ C. $\text{CHCl}_3 + \text{C}_6\text{H}_6$ D. $(\text{CH}_3)_2\text{CO} + \text{CS}_2$

Answer

37. If ΔG for a reaction is negative, you infer that the change is :

A. spontaneous

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

C. reversible

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

D. irreversible

Answer

38. $\text{Zn(s)} | \text{Zn}^{2+}(\text{aq}) || \text{Cu}^{2+}(\text{aq}) | \text{Cu(s)}$ is :
(anode) (cathode)

- A. Weston cell
- B. Daniel cell
- C. Faraday cell
- D. Standard cell

Answer

39. An important industrial solvent, also a laboratory reagent called 2-butanone is nothing but:

- A. methyl ethyl ketone
- B. methyl propyl ketone
- C. dimethyl ketone
- D. diethyl ketone

Answer

40. The catalyst used for the polymerization of olefins is :

- A. Ziegler-Natta catalyst
- B. Wilkinson's catalyst
- C. Pd-catalys
- D. Zeise's salt catalyst

Answer

41. Bakelite is a:

- A. urea-formaldehyde resin
- B. phenol formaldehyde resin
- C. polyethylene
- D. artificial rubber

Answer

42. α -helix is found in :

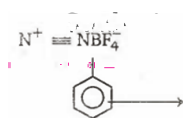
- A. DNA
- B. RNA
- C. Lipid
- D. Protein

Answer

43. Aspirin is:

- A. acetyl salicylic acid
- B. 2-methoxy benzoic acid

Answer



44.

- A. fluorobenzene
- B. benzene
- C. 1, 2-difluoro benzene
- D. 1, 3-difluoro benzene

Answer

45. Oxidation of aldehydes gives :

- A. esters
- B. acids
- C. ethers
- D. alcohols

Answer

46. The common acid used in the manufacture of rayon and plastic is :

- A. methanoic acid
- B. ethanoic acid
- C. propanoic acid
- D. butanoic acid

Answer

47. The compound used as an explosive is:

- A. 2,4,6-tribromoaniline
- B. 2,4,6-trinitrotoluene (TNT)
- C. 1,3,5-trinitrobenzene
- D. 2,4,6-trichlorotoluene

Answer

48. The indicator that is obtained by coupling the diazonium salt of sulphanilic acid with N, N-dimethyl aniline is

- A. phenanthroline
- B. methyl orange
- C. methyl red
- D. phenolphthalein

Answer