

Chemistry 2013

3. Orbital is

- (a) circular path around the nucleus in which electrons are revolves
- (b) space around the nucleus where the probability of finding the electron is maximum
- (c) amplitude of electrons wave
- (d) None of the above

Ans.(b)

7. In the oxyacids of chlorine, Cl—O bond contains

- (a) dit — *dit* bonding
- (b) *dn* — pit bonding
- (c) pit — pit bonding
- (d) None of the above

Ans.(b)

8. Anhydrous MCl_3 fume in air due to

- (a) oxidation (b) hydrolysis
- (c) reduction (d) hydrogenation

Ans.(b)

13. Which of the following reaction doesn't support the acidic nature of alkyne?

- (a) Reaction with HBr
- (b) Reaction with Grignard reagent
- (c) Reaction with ammoniacal silver salt
- (d) Reaction with metallic sodium

Ans.(a)

18. Complete hydrolyses of cellulose gives

- (a) D-fructose (b) D-ribose
(c) D-glucose (d) L-glucose

Ans.(c)

21. Benzaldehyde condenses with N,N-dimethyl aniline in presence of anhydrous ZnCl₂ to give

- (a) azo dye (b) malachite
(c) michlers ketone (d) buffer yellow

Ans.(b)

22. Which of the following reactions is given by only primary amines?

- (a) Reaction with HNO₂
(b) Reaction with chloroform and alcoholic KOH
(c) Reaction with *acetyl* chloride
(d) Reaction with Grignard reagent

Ans.(b)

26. Aldehyde not showing cannizzaro's reaction is

- (a) paraldehyde (b) choral
(c) formaldehyde (d) acetaldehyde

Ans.(d)

28. Which of the following statements is not correct?

- (a) All alcohols are miscible with water
(b) Only lower alcohols are miscible with water
(c) All alcohols are not poisonous
(d) Methanol IS poisofloUS

Ans.(a)

29. Cyclohexanol is

- (a) phenol (b) 1 alcohol
(c) 2 alcohol (d) 3 alcohol

Ans.(c)

30. In the manufacture of ethanol from sugar the enzymes are

- (a) diastase and zymase
(b) maltase and zymase
(c) diastase and invertase
(d) invertase and zymase

Ans.(d)

31. The action of chloral on chlorobenzene gives

- (a) BHC (d) DDT
(c) gamma-hexachlorocyclopentadiene (d) lindane

Ans.(b)

32. Which halide will be least reactive in respect to hydrolysis?

- (a) vinyl chloride (b) allyl chloride
(c) ethyl chloride (d) t-butyl chloride

Ans.(a)

33. By Wurtz reaction, a mixture of methyl iodide and ethyl iodide gives

- (a) butane
(b) ethane
(c) propane
(d) a mixture of above three

Ans.(d)

34. The cyanide process is used for obtaining

- (a) Cu (b) Na
(C) Zn (d) Ag

Ans.(d)

35. Which of the following ore does not represent the ores of iron?

- (a) Cassitente (b) Limonite
(c) Haenatitc (d) Magnetite

Ans.(a)

36. vanArkel method of punficati'n of metals involves converting the metal to a

- (a) volatile stable compound
(b) non.volatilt stable compound
(c) volatile unstable compound
(d) None of the above

Ans.(a)

37. The first element of rare earth metal is

- (a) cerium (b) cesium
(C) lanthanide (d) actinide

Ans.(a)

38. Which of the following transitions involves maximum amount of energy?

- (a) $M_{(g)} \rightarrow M(g)$
(b) $M_{(g)} \rightarrow m^+$
(c) $M(S) \rightarrow M^{2+}(g)$
(d) $M^{2+}(g) \rightarrow m^{3+}(g)$

Ans.(d)

39. Transition metal with low oxidation number will act as

- (a) an oxidising agent (b) a base
- (c) an acid (d) None of these

Ans.(a)

40. Chloride of which of the following element is coloured?

- (a) Hg (b) Ag
- (c) Co (d) Zn

Ans.(c)

41. Spiegeleisen is an alloy of

- (a) Fe, Co and Cr (b) Fe, Co and Mg
- (c) Fe, Mg, and C (d) Fe, C and Mn

Ans.(d)

44. Which of the following is a wrong statement?

- (a) $\text{Ni}(\text{CO})_4$ has zero oxidation number for Ni
- (b) $\text{Ni}(\text{CO})_4$ has oxidation number +4 for Ni
- (c) Ni is metal
- (d) CO is gas

Ans.(b)

46 Standard electrode potential of NHE at 298 K is

- (a) 0.05V (b) 0.10V
- (c) **0.50 V** (d) 0.00 V

Ans.(d)

49. Multinolecular colloids are present in

- (a) soap solution
- (b) sol of proteins
- (c) sol of gold
- (d) All of these

Ans.(c)

50. In physical adsorption, the gas molecules are held by solid surfaces through

- (a) strong chemical forces
- (b) van der Waals' forces
- (c) metallic bonds
- (d) gravitational forces

Ans.(b)

51. The osmotic pressure of a 5% (wt./vol) solution of cane sugar at 15°C is

- (a) 3.078 atm
- (b) 4.078 atm
- (c) 5.078 atm
- (d) 2.45 atm

Ans.(c)

53. The pH of a solution is increased from 3 to 6. its H⁺ ion concentration will be

- (a) reduced to half
- (b) doubled
- (c) reduced by 1000 times
- (d) increased by 1000 times

Ans.(c)

56. Radioactive decay is a

- (a) first order reaction
- (b) zero order reaction
- (c) second order reaction
- (d) third order reaction

Ans.(a)

59. An ideal gas at constant temperature and pressure expands, then Its

- (a) internal energy remains same
- (b) internal energy decrease
- (c) internal energy increases
- (d) entropy first increases and then decreases

Ans.(a)