

## 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 ZnCl<sub>2</sub> 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 HNO<sub>2</sub>  
(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) chloral  
(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 poisonous

**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) Haenatitic (d) Magnetite

Ans.(a)

36. vanArkel method of purification of metals involves converting the metal to a

- (a) volatile stable compound  
(b) non-volatile 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)  $M_{(g)} \rightarrow M^+(g)$   
(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)  $\text{CO}$  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. Multirnolcular 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) stiong chemical forces
- (b) van der waals' forces
- (c) metallic bonds
- d) gravitational forces

**Ans.(b)**

**51. The osmotic pressure of a 5% (wt./voi) solution of cane sugar at 150C is**

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

**Ans.(c)**

**53. The p11 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)