

CHEMISTRY - SPECIAL TEST - 2

- 1. The colour of methyl orange in basic medium is**
a) yellow b) pink c) red d) colourless
- 2. The colour of quinonoid form of phenolphthalein is**
a) yellow b) pink c) red d) colourless
- 3. Kohlraushs law is applicale at**
a) higher concentration b) lower concentration
c) any concentration d) infinite dilution
- 4. The P^H range of phenol red is**
a) 6.2 – 8.4 b) 6 – 8.4 c) 8.3 – 10 d) 6.8– 8.4
- 5. The P^H range of methyl red is**
a) 3.1 – 4.4 b) 6.8 – 8.4 c) 8.3 – 10 d) 4.4– 6.2
- 6. Silicon doped with arsenic becomes conductor .**
a) P type semi b) n type semi c) ionic d) mixed
- 7. Methyl orange cannot be used for the titration of**
a) CH₃COOH Vs NaOH b) HCl Vs NH₄OH
c) HCl Vs NaOH d) HNO₃ Vs KOH
- 8. Which of the following is a state function**
a) q b) Δq c) w d) Δ s
- 9. Which one of te following is not a state function?**
a) entropy (s) b) enthalpy (H) c) free energy (G) d) Heat absorbed (q)
- 10. The P^H range of phenolphthalein is**
a) 3.1 – 4.4 b) 4.4 – 6.2 c) 6.8 – 8.4 d) 8.3 - 10
- 11. . The P^H range of methyl orange is**
a) 3.1 – 4.4 b) 4.4 – 6.2 c) 6.8 – 8.4 d) 8.3 – 10

12. Brownian movement is a Property of a colloid.

- a)optical b) kinetic c) electrical d) magnetic

13. Tyndall effect is a Property of a colloid.

- a)optical b)kinetic c)electrical d)magnetic

14. Helmholtz double layer is a property of a colloid.

- a)optical b) kinetic c) electrical d) magnetic

15. Medicines are generally used in colloid state because

- a) these are more effective and readily assimilated b)they are easily prepared
c) these are cheaper d)they act as germicide

16.Emulsion can be diluted using

- a) Nacl b) emulsifying agent c) dispersion medium d) dispersed phase

17. Arsenic sulphide (As_2S_3) Sol is prepared by

- a)oxidation b) hydrolysis c) double decomposition d) reduction

18. Colloidal graphite and printing inks can be prepared by

- a) colloidal mill b) peptisation c) hydrolysis d) none of these

19. Metal sol are prepared by

- a)peptisation b) solvent exchange method
c) bredig arc method d) colloidal mill

20. The movement of sol particles under an applied electric potential is called

- a) electric osmosis b)electrodialysi c) electrophoresis d) dialysis

21. The movement of the dispersion medium under the influence of applied potential is known as

- a) electric osmosis b)electrodialysis c) electrophoresis d) dialysis

22. The unit of eu and EU are respectively,

- a) cal k^{-1} and Jk^{-1} b) cal k^{-1} and KJ c) cal k^{-1} and cal mol^{-1} d) none of these

23. Which of the following exists with low entropy.

- a)ice b)water c) steam d) mixture of water and steam

24. Maximum entropy will be shown by

- a)ice b) water c) snow d) steam

25. Alcohols deviates from troutons rule since it.

- a)has low melting point b) forms hydrogen bond c) has low ΔH_{vap} d) low Δs_{vap}

26. Entropy of the universe is always

- a)increasing b) decreasing c) zero d) constant

27. which of the following liquids obeys troutons rule?

- a) H_2 b) H_2O c) CH_3COOH d) CHCl_3

28. which form of substance can obey troutons rule?

- a)low boiling liquids b)hydrogen bonded liquids
c) liquids with low entropy of vapourisation d) covalent molecules

29. which one of the following is not a state function?

- a)entropy s b) enthalpy H c)Free energy G d) Heat absorbed q

30. ionization energy is measured in

- a) ev/atom b) kcal/mol c) KJ/mol d) all of these

31. The efficiency of a machine can be

- a)0 % b) 100% c) > 100% d) <100 %

32. The S.I unit of entropy is

- a) cal k^{-1} b) cal k^{-1} and KJ c) cal k^{-1} and cal mol^{-1} d) Jk^{-1}

33. Which one of the following is a state function.

- a) q b) Δq c) w d) Δs

34. Which of the following is a path function.

- a) q b) Δq c) w d) a and b

35. which of the following is a state function.

- a) s and Δs b) H c) G d) All of these

36..... The process is spontaneous and feasible.

- a) ΔG is - ve b) ΔG is + ve
c) ΔG is equilibrium d) none of these

37. ferrochrome is an alloy of ?(o -07)

- a) cr,C,Fe,Ni b) cr,Co,Ni,c c) Fe,cr d) cr,Ni,Fe

38. Nichrome is an alloy of (M- 13)

- a) Cr,Ni,Fe b) Cr,Co,Ni c) cr,Fe d) cr,Fe,Cu

39. stainless stell is an alloy of

- a) Cr,Fe b) Cr,C,Fe c) cr,Ni,Fe d) cr,Fe,Co,Ni

40. stellite is an alloy of

- a) Cr,Co,Ni,c b) Cr,C,Fe c) cr,Ni,Fe d) cr,Fe

41. Brass is an alloy of

- a) Cu = 87%,Sn = 10 % b) Cu = 60 – 80 % , Zn = 20 – 40 %
c) Cu = 87 % ,Sn = 10 % , Zn = 3 % d) Cu = 75 – 90 % ,Sn = 10 – 25 %

42 . bronze is an alloy of

- a) Cu = 87%,Sn = 10 % b) Cu = 60 – 80 % , Zn = 20 – 40 %
c) Cu = 87 % ,Sn = 10 % , Zn = 3 % d) Cu = 75 – 90 % ,Sn = 10 – 25 %

43. Gun metal is an alloy of

- a) Cu = 87%, Sn = 10 % b) Cu = 60 – 80 % , Zn = 20 – 40 %
 c) Cu = 87 % , Sn = 10 % , Zn = 3 % d) Cu = 75 – 90 % , Sn = 10 – 25 %

44 . The unit of activation energy is

- a) sec^{-1} b) $\text{J k}^{-1} \text{Mol}^{-1}$ c) Jmol^{-1} d) $\text{k}^{-1} \text{mol}^{-1}$

45. Electron affinity is expressed in

- a) KJ b) J c) kJmol d) KJmol^{-1}

46. The unit of molar conductance is

- a) $\text{ohm}^{-2} \text{m mol}^{-1}$ b) $\text{ohm}^{-1} \text{mol}^{-1}$ c) $\text{ohm}^{-1} \text{m}^3 \text{mol}^{-2}$ d) $\text{ohm}^{-1} \text{m}^2 \text{mol}^{-1}$

47. The unit of electrochemical equivalent is

- a) volt coulomb b) kg coulomb^{-1} c) volt / kg d) kg volt coulomb

48 . The unit of quantity of electricity is

- a) volt b) ampere c) coulomb d) ohm

49 . unit of cell constant is

- a) ohm^{-1} b) m^{-1} c) kgc^{-1} d) no unit

50. unit of ionic product water is

- a) $\text{mol}^{-1} \text{dm}^{-3}$ b) $\text{mol}^2 \text{dm}^{-6}$ c) $\text{mol}^{-2} \text{dm}^{-6}$ d) no unit

51. the S.I unit of specific resistance is

- a) ohm b) ohm meter c) ohm meter^{-1} d) $\text{ohm}^{-1} \text{meter}^{-1}$

52. the S.I unit of electrical current is

- a) volt b) ampere c) ohm d) mho

53. ohm is the unit of

- a) current b) potential difference c) resistance d) quantity of electricity

54 . The S.I Unit of entropy is

- a) cal K⁻¹ mol⁻¹ b) erg K⁻¹ mol⁻¹ c) Jdeg⁻¹K⁻¹ d) J K⁻¹ mol⁻¹

55. the process is non spontaneous and non feasible.

- a) ΔG is +ve b) ΔG is - ve c) ΔG is equilibrium d) none of these

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SPECIAL TEST - 3

OXIDATION

1. **Benzyl amine is oxidized to give**
 - a) aniline
 - b) benzoic acid
 - c) toluene
 - d) acetic acid
2. **Reduction of nitrobenzene presence of Sn/HCl**
 - a) aniline
 - b) benzene diazonium chloride
 - c) phenol
 - d) benzyl amine
3. **Benzamide is treated with bromine and alkali gives aniline .**
 - a) sandmeyer rxn
 - b) gomberg rxn
 - c) coupling rxn
 - d) hofmann bromide rxn
4. **Aniline react with nitrous acid gives**
 - a) benzene
 - b) benzene diazonium chloride
 - c) phenol
 - d) benzyl amine
5. **Aniline is oxidized presence of $K_2Cr_2O_7$ **
 - a) phenol
 - b) benzyl amine
 - c) benzoquinone
 - d) none of these
6. **Use of aniline is**
 - a) Sulpha drugs
 - b) polyurethane plastics
 - b) antioxidant in rubber industry
 - d) all of these .
7. **aniline react with benzoyl chloride gives benzamide.**
 - a) Hoffmann bromide rxn
 - b) schotten baumann rxn
 - c) carbylamine rxn
 - d) none of these.
8. **characteristic of primary amine**
 - a) carbylamine rxn
 - b) mustard oil rxn
 - c) Schiff base
 - d) none of these
9. **Foul smelling substance**
 - a) CH_3NC
 - b) $CH_3-N=C=S$
 - C) $C_6H_5CH=N-CH_3$
 - d) all of these
10. **manufacture of synthetic polymers.**
 - a) PAN
 - b) Methane nitrile
 - c) acetonitrile
 - d) none of these
11. **Benzene diazonium chloride with hypophosphorous acid gives**
 - a) benzene
 - b) phenol
 - c) anisole
 - d) nitrobenzene
12. **Benzene diazonium chloride is boiled**
 - a) benzene
 - b) phenol
 - c) aniline
 - d) none of these
13. **diazonium salt treated with sodium nitrite presence of cuprous ion**
 - a) nitrobenzene
 - b) aniline
 - c) $C_6H_5N_2Cl$
 - d) $C_6H_5CH_2NH_2$

14. Benzene diazonium chloride is reduced to Zn/HCl or SnCl₂/HCl or NaHSO₃

- a) C₆H₅NHNH₂ b) C₆H₅NH₂ c) C₆H₅NO₂ d) C₆H₅N₂Cl

15.
$$\text{C}_6\text{H}_5\text{N}_2\text{Cl} + \text{C}_6\text{H}_6 \xrightarrow{\text{NaOH}} \text{C}_6\text{H}_5 - \text{C}_6\text{H}_5 + \text{N}_2 + \text{HCl}$$

- a) Sandmeyer reaction b) gomberg Bachmann reaction
 C) gattermann reaction d) schotten baumann reaction

16. diazonium chloride is warmed with copper powder and hydrogen halide gives

- a) C₆H₅Cl b) C₆H₅Br C) C₆H₅CN d) a and b

17. Iodobenzene cannot be prepared By this reaction.

- a) Sandmeyer reaction b) gomberg Bachmann reaction
 C) gattermann reaction d) coupling reaction

18. Nitro group is directing group.

- a) ortho b) meta c) para d) all of these

19. Nitration of benzene Is intermediate compound .

- a) tosylate ion b) arenium ion c) sulphonic acid d) nitro benzene

20. Nitrobenzene is reduced with Sn/HCl gives

- a) aniline b) benzamide c) benzyl amine d) benzene diazonium chloride

21. Nitrobenzene is reduced with zn/HCl gives

- a) C₆H₅NH₂ b) C₆H₅NO₂ c) C₆H₅NHOH d) None of these

22. Nitrobenzene is reduced with H₂/Ni or LiAlH₄ gives

- a) C₆H₅NH₂ b) C₆H₅NHOH c) C₆H₅N₂Cl d) None of these

23. Schiffs base

- a) C₆H₅CH = NCH₃ b) CH₃OH c) C₆H₅OH d) C₆H₅N₂Cl

24. primary amine react with nitrous acid gives

- a) (CH₃)₂N-N = O b) CH₃OH c) C₆H₅OH d) C₆H₅N₂Cl

25. Nitro compound behave as acids in presence of strong alkali.

- a) primary b) secondary c) tertiary d) a and b

26. which compounds exhibits Nitro – acinitro tautomerism .

- a) $C_6H_5NO_2$ b) CH_3NO_2 c) $C_6H_5NH_2$ d) CH_3NH_2

27. The oxidizing agent used for converting glycol into oxalic acid is

- a) dil . HNO_3 b) bismuth nitrate c) $FeSO_4 + H_2O_2$ d) $K_2Cr_2O_7$

28 . Which of the following has an offensive odour ?

- a) phenol b) allyl alcohol c) acrolein d) acetic acid

29. which of the following reagents will distinguish phenol from benzyl alcohol .

- a) PCl_5 b) Na c) Neutral $FeCl_3$ d) Fentons reagent

30. glycerol on oxidation with bismuth nitrate gives

- a) glyceric acid b) glyceraldehydes c) mesooxalic acid d) oxalic acid

31. ethylene glycol on oxidation with $K_2Cr_2O_7$ gives

- a) $HCOOH$ b) CH_3COOH c) CH_3CHO d) $HCHO$

32. glycerol on oxidation with dil. HNO_3 gives

- a) glyceric acid b) tartronic acid c) acetic acid d) a and b

33. the characteristic odour of lower phenol is

- a) carboxylic acid b) fruity c) oil of bitter almonds d) rotten fish

34. Phenol on oxidation with chromyl chloride gives

- a) formic acid b) acetic acid c) benzoic acid d) benzoquinone

35. benzyl alcohol on oxidation with alkaline $KMnO_4$ gives.....

- a) C_6H_5COOH b) C_6H_5OH c) C_6H_6 d) None of these

36. The toxic element of boron family is

- a) boron b) indium c) thallium d) thallium

37. which has low melting point in boron family ?

- a) B b) Al c) Ga d) In

38. rare element of boron family is

- a) B b) Al c) Ga d) In

39. second most abundant in the earth crust is

- a) C b) Si c) Ge d) Pb

40. Is make up 78% of the earth atmosphere by volume .

- a) N b) P c) As d) Sb

41. Is used as an additive to petrol to prevent knocking .

- a) Pb b) Pb (C₂H₅)₄ c) Pb (CH₃)₄ d)Sb

42. is the most abundant element of 15 th group .

- a) N b) P c) Pb d) Bi

43. Is used to make pesticides and semiconductors.

- a) GaAs b) GeAs c) BiAs d) none of these

44. which of the following does not belong to group 14?

- a) C b) Si c) Ga d) Pb

45 . which of the following does not belong to group 15?

- a) N b) P c) Bi d) c
