

St. JOSEPH ACADEMY MATRIC Hr. Sec. SCHOOL - Sankarapuram
Std – XII - Chemistry – Expected Questions

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Q. No	Lesson
64 (a)	Periodic classification
(b)	P – Block element

64 (a) Periodic classifications

1. Explain Pauling method to determine ionic radii
2. Explain the variation of I. E along the group and period
3. Explain the various factors that affect electron affinity
4. Describe about the factors governing ionization energy
5. Write about the Pauling's scale of determination of electro negativity
6. Write the application of electro negativity

(b) P – Block elements

1. Mention the uses of silicones
2. How to extracted lead from it is chief ore.
3. How fluorine is isolated from their fluorides (or) Explain Danni's method
4. Describe in how noble gases are isolated from air (or) explain Ramsay – Raleigh's method.
5. Describe in how noble gases are isolated from air by Dewar's process
6. Explain anomalous nature of fluorine
7. Prove that H_3PO_3 is diprotic and H_3PO_4 is triprotic

Q. No	Lesson
65 (a)	Co – ordination compound
(b)	Nuclear Chemistry

65. (a) Co – Ordination

1. Explain isomerism with suitable example.
2. Explain the postulates of Werner's theory
3. Explain postulates of valence bond theory
4. Mention the function of Hemoglobin in natural process.
5. How is chlorophyll important in environmental chemistry? Mention it's functions
6. In what way $[FeF_6]^{4-}$ differ from $[Fe(CN)_6]^{4-}$?
7. For the complexes is given below mention
 - i) Name
 - (ii) Central metal ion
 - iii) ligand
 - iv) Co – ordination number
 - v) Geometry
 - a) $K_4[Fe(CN)_6]$
 - b) $[Fe(CN)_6]$
 - c) $[FeF_6]$
 - d) $[Ni(CN)_4]$
 - e) $[NiCl_4]$
8. $[Ni(CN)_4]^{2-}$ Dia magnetic whereas $[NiCl_4]^{2-}$ paramagnetic why?
9. Mention the tupe of hybridization any magnetic property of following complexes using VB theory
 - a) $[FeF_6]^{4-}$
 - b) $[Fe(CN)_6]^{4-}$
10. Write a note on
 - i) Neutral ligand
 - ii) Chelates
 - iii) Co – Ordination sphere

(b) Nuclear Chemistry

1. Distinguish between nuclear fission and fusion
2. Distinguish between chemical reaction nuclear reaction
3. Write a note on radio carbon dating
4. Explain about the nuclear fusion reaction takes place in sun and star
5. Explain hydrogen bomb
6. Explain the uses of radio isotope sin medicinel

Compound

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Q. No	Lesson
66 (a)	Solid state
(b)	Surface Chemistry

66. (a) Solid State

1. Write Bragg's equation and significance
2. Explain Schottky and Frankel defect
3. What are super conductor and mention its uses.
4. Explain Bragg's spectro meter
5. Explain the nature of glass
6. Explain AB and AB₂ type crystal
7. Write the characteristic of ionic crystal

(b) Surface Chemistry

1. Distinguish between physical adsorption and chemical adsorption
2. Discuss the factors affecting of adsorption
3. Write briefly intermediate compound theory
4. Write briefly about adsorption theory
5. Write the general character of catalytic reaction
6. Write briefly about the preparation of colloids by dispersion method
7. Write briefly about the preparation of colloids by condensation method (or) Chemical method
8. Explain about electrophoresis
9. Write application of colloids
10. Write a note on emulsion
11. Write a note on
 - i) Dialysis
 - ii) Electro dialysis
 - iii) Ultra filtration
12. Write a note on
 - i) Tyndall effect
 - ii) Brownian movement
 - iii) Helmholtz double layer

Q. No	Lesson
67 (a)	Electro Chemistry – I
(b)	Electro Chemistry – II

67. (a) Electro Chemistry – I

1. Write an account of the Arrhenius theory of electrolytic dissociation
2. Write about the evidence of Arrhenius theory of electrolytic dissociation
3. Explain Ostwald's dilution law.
4. Explain buffer action with an example
5. Derive Henderson's equation
6. Write a note a quinoid theory of indicator

(b) Electro chemistry – II

1. Explain the reaction taking place in Daniel cell with diagram
2. Write a note on IUPAC convention of representation of a cell
3. Write an account on cell Terminology
4. How emf of a cell is determined
5. Derive Nernst equation
6. Explain SHE constructed?
7. How is emf of a half cell determined

Compulsory

Q. No	Lesson
70 (a)	Hydroxy derivative
(b)	D – Block Elements

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MANPOWER COCHING CENTRE -SPL

Book interior one mark special test

Class: XII

. Sub : CHEMISTRY

- The bond order of nitrogen molecule is.
a) 2.5 b) 3 c) 2 d) 4
- The type of hybridization in CO_3^{2-} ion is.
a) sp b) sp^2 c) sp^3 d) sp^3d
- Which one of the following molecule is paramagnetic?
a) H_2 b) He_2 c) N_2 d) O_2
- The circumference of the circular orbit of electron is an integral multiple of its.
a) Frequency b) momentum c) mass d) wavelength
- The nature of hybridization in IF_7 molecule is
a) $\text{SP}^2 \text{d}^2$ b) $\text{Sp}^3 \text{d}^4$ c) $\text{Sp}^3 \text{d}^3$ d) $\text{sp}^2 \text{d}^4$
- Inter – molecular hydrogen bonding is present in
a) HF b) H_2O c) ethanol d) all of these
- The hybridization involved in XeF_6 is
a) $\text{sp}^3 \text{d}^3$ b) $\text{sp}^3 \text{d}^2$ c) $\text{sp}^3 \text{d}$ d) sp^3
- Energy levels of molecular orbital's have been determined experimentally by
a) Spectroscopic studies b) x – ray diffraction c) crystallographic studies d) none of these
- In a molecule eight electrons are present in bonding molecular orbital and four electrons are present in anti – bonding molecular orbital its bond order is.
a) 3 b) 4 c) 2-5 d) 2
- Water exists in liquid state. This is due to.
a) high boiling point b) low boiling point c) freezing point is zero d) hydrogen bond
- The hybridization in SO_4^{2-} ion is
a) sp^3 b) $\text{sp}^3 \text{d}^3$ c) $\text{sp}^3 \text{d}$ d) $\text{sp}^3 \text{d}^3$
- Number of spherical nodes in 2s orbital is
a) 1 b) 2 c) 3 d) 4

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13. Which one of the following experiments confirmed the wave nature of electron?

- a) G. P. Thomson's gold foil experiment b) Black body radiation
c) photoelectric effect d) Millikan's oil – drop experiment

14. The hybridization in IF_7 molecule is -----

- a) sp^3d b) sp^3d^2 c) sp^3 d) sp^3d^3

15. Molecular orbital with the least energy is

- a) $\sigma 1s$ b) $\sigma^* 1s$ c) $\pi^2 py$ d) $\pi^* py$

16. The hybridization in NH_4^+ ion is

- a) sp b) sp^2 c) sp^3 d) sp^3d

17. The nature of hybridization in PCl_5 molecule is

- a) SP^3d^2 b) Sp^3d c) Sp^3 d) sp^2

18. The hybridization in ICl_4^- ion is

- a) sp^3 b) sp^3d c) SP^3d^2 d) SP^3d^3

19. The molecular orbital's are filled according to.

- a) paulis exclusion principle b) hunds rule c) aufbau principle
d) all the above

20. Which has least melting point?

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

21. The general electronic configuration of carbon family is.

- a) $ns^2 np^2$ b) $ns^2 np^3$ c) $ns^2 np^1$ d) $ns^2 np^4$

22. The metalloid among the following is.

- a) Pb b) P c) Ge d) Sn

23. The toxic element of boron family is.

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

24. Which of the following does not belong to group 14?

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

25. Which of the following has the property of etching on glass?

- a) HI b) HF c) HBr d) HCl

26. The compound used to arrest the bleeding is -----

- a) K_2SO^4 b) potash alum c) $Al_2(SO_4)_3$ d) KI

27. Which of the following shows negative oxidation state only?

- a) Br b) F c) Cl d) I

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28. An element which belongs to group 14 is soft in nature, does not react with pure water, but dissolves in water containing dissolved air. Then the element is

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

29. Inert gas used in beacon lights for safety of air navigation is.

- a) Helium b) Argon c) Neon d) Xenon

30. The value of magnetic moment of Ti^{3+} ion is

- a) 0 b) 1.73 c) 2.83 d) 3.87

31. Zn displaces Au from $K[Au(CN)_2]$ because

- a) Zn is more electro positive than Au b) Au is more electro positive than Zn
c) Zn is more electro negative than Au
d) Atomic mass of Zn is greater than Au

32. The metal used in galvanising iron sheets is

- a) chromium b) zinc c) copper d) silver

33. Bordeaux mixture contains.

- a) $AgNO_3 + HNO_3$ b) $ZnSO_4 + H_2SO_4$ c) $CuSO_4 + Ca(OH)_2$
d) $KMnO_4 + HCl$

34. $K_2Cr_2O_7$ reacts with KI and dilute sulphuric acid and liberates

- a) O_2 b) I_2 c) H_2 d) SO_2

35. The color of purple of cassius is

- a) Purple b) blue c) bluish green d) apple green

36. Ferrochrome is an alloy of

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

37. Silver obtained from silver coin is purified by fusion with

- a) $AgNO_3$ b) HNO_3 c) H_2SO_4 d) borax

38. Which of the following is wrong statement regarding $K_2Cr_2O_7$?

- a) Oxidizing agent b) used tanning industry c) soluble in water
d) reduces ferrous sulphate

39. The number of unpaired electrons in Ti^{3+} is 1. Its magnetic moment in Bm is

- a) 1.414 b) 2 c) 1.732 d) 3

40. The catalyst used in the manufacture of polythene is.

- a) V_2O_5 b) Fe c) MO d) $TiCl_4$

41. A metal which precipitates gold from its aurocyanide complex is.

- a) Cr b) Ag c) Pt d) Zn

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42. The reagent which is added first in the separation of silver from silver coin.

- a) Conc. Sulphuric acid b) Conc. Hydrochloric acid c) Con. Nitric acid
d) aquaregia

43. The substance used in making ruby red glass and high class pottery is.

- a) Colloidal silver b) purple of cassius c) ruby silver
d) ruby copper

44. Spitting of silver can be prevented by covering the molten metal with a than layer of.

- a) Borax b) charcoal c) sand d) silver bromide

45. If the magnetic moment value is 5.92 BM, the number of unpaired electrons is.

- a) 5 b) 3 c) 4 d) 6

46. Which one of the following will have maximum magnetic moment?

- a) $3d^2$ b) $3d^6$ c) $3d^7$ d) $3d^9$

47. Which of the following pairs have almost equal radii?

- a) Mo, W b) Y, La c) Zr, Hf d) Nb, Ta

48. If the magnetic moment value is 1.732 BM, the number of unpaired electrons is.

- a) 1 b) 2 c) 3 d) 4

49. ----- is used in gas lamp material

- A) MnO_2 b) CeO_2 c) N_2O_5 d) Fe_2O

50. The actinide which cannot make the common oxidation state +4 is.

- a) Ac b) Th c) Pa d) U

51. In f – block elements the following shells are incomplete

- a) n b) (n - 1) c) (n - 2) d) all the above

52. Actinide contraction is due to imperfect shielding of

- a) 4 f electrons b) 5 f electrons c) 6d electrons d) 7s – electrons

53. The radioactive lanthanides elements, with the increase in atomic number the tendency to act as reducing agent.

- a) Increase b) decrease c) no change d) none of these

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54. The long mission space probes use ----- as power source

- a) Pu b) U c) Th d) Pm

55. The common oxidation state of actinide is.

- a) +2 b) +3 c) +4 d) +6

56. ThO₂ is used in -----

- a) toys b) tacer bullets c) gas lamp materials d) deying cotton

57. Which of the following is a radioactive lanthanide?

- a) Pu b) Ac c) Th d) Pr

58. ----- is the oxidation state of U in UF₆

- a) +6 b) +4 c) +3 d) 0

59. According to Fajan's rule decrease in size of Ln³⁺ ion in Ln (OH)₃

- a) Increase the covalent character b) decrease the covalent character
c) increase the basic character d) increase the ionic character

60. Which is used as a power source in long mission space probes?

- a) Uranium – 235 b) Uranium – 238 c) plutonium – 238
d) Mish metal

61. The type of hybridization of the central metal ion in the complex [Ni (CN)₄]²⁻ is.

- a) sp³ b) sp³ d c) d sp² d) d sp³

62. IUPAC name of the complex K₃ [Cr(C₂O₄)₃]³⁻ H₂O is

- a) Potassium tri oxalate chromate (III) trihydrate
b) triaquo potassium tri oxalate chromate (iii)
c) Potassium tris (oxalato) chromate (III) trihydrates
d) Potassiumtris (oxalato) chromate (III) trihydrate

63. The type of isomerism found in the complexes [Pt (NH₃)₄[CuCl₄] and [Cu (NH₃)₄] [PtCl₄]

- a) Ionization isomerism b) co – ordination isomerism
c) linkage isomerism d) ligand isomerism

64. Which of the following is cationic complex?

- a) K₄[Fe (CN)₆] b) [Cu (NH₃)₆]Cl₂ c) K₃[Cr(C₂O₄)₃] d) K₃[Fe(CN)₆]

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65. The coordination number of Cr (III) in $[\text{Cr}(\text{H}_2\text{O})_4\text{Cl}_2]\text{Cl}\cdot 2\text{H}_2\text{O}$ is.

- a) 3 b) 4 c) 6 d) 2

66. The coordination number of Nickel in the complex ion $[\text{NiCl}_4]^{2-}$

- a) +1 b) +4 c) +2 d) +6 is

67. The most penetrating radiations are

- a) α - rays b) β - rays c) γ - rays d) all are equally penetrating

68. High speed projectiles may chip a heavy nucleus into several fragments in.

- a) Nuclear fission reactions b) nuclear fusion reaction
c) spallation reaction d) all of these

69. After 24 hours 0.125g of the initial quantity of 1g of a radioactive isotope is left out. The half - life period is.

- a) 24 hours b) 12 hours c) 8 hours d) 16 hours

70. When ${}^7_3\text{N}^{15}$ is bombarded with a proton it gives ${}^6_6\text{C}^{12}$ and

- a) α - particle b) β - particle c) neutron d) proton

71. In nuclear reaction ----- is are balanced on both sides

- a) mass b) number of atoms c) mass number
d) atomic number and mass number

72. Half - life period of a radioactive element is 1500 years. The value of disintegration terms of second is -----

- a) $0.1465 \times 10^{-10} \text{ sec}^{-1}$ b) $0.2465 \times 10^{-10} \text{ sec}^{-1}$ c)
 $0.1465 \times 10^{-8} \text{ sec}^{-1}$ d) $0.3645 \times 10^{10} \text{ sec}^{-1}$

73. Half -life period of a radioactive element is 100 seconds. Its average life period is.

- a) 100 seconds b) 50 seconds c) 200 seconds d) 144 second

74. ${}_{92}\text{U}^{235}$ nucleus absorbs a neutron and disintegrates into ${}_{54}\text{Xe}^{139}$, ${}_{38}\text{Sr}^{94}$ and X. What is X?

- a) 3 neutrons b) 2 neutrons c) α - particle d) β - particle

75. Half life period of ${}_{79}\text{Au}^{198}$ Nucleus is 150 days. The average life is.

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a) 216 days b) 21.6 days c) 261 days d) 26.1 days

76. β particles is represented as

a) ${}_{+1}e^0$ b) ${}_{-1}e^0$ c) ${}_1H^1$ d) $2He^4$

77. The number of chloride ions present per unit of CsCl

a) 6 b) 8 c) 1 d) 4

78. The ion leaves its regular site and occupies a position in the space the lattic sites. The defect is called is.

a) Schottky defect b) Frenkel defect c) impurity defect
d) vacancy defect

79. The co – ordination number of ZnS is

a) 3 b) 4 c) 6 d) 8

80. The crystal lattice with coordination number.

a) CsCl b) ZnO c) BN d) NaCl

81. Which one of the following crystals has 8: 8 structure.

a) MgF₂ b) CsCl c) KCl d) NaCl

82. The standard free energy value (G°) of formation of an element in its stable state is.

a) Zero b) negative c) positive d) unpredictable

83. A liquid which obeys Trouton's rule is.

a) H₂ b) H₂O c) CH₃COOH d) CCl₄

84. The change of entropy for the process $H_2O_{(liq)} \rightarrow H_2O_{(vap)}$

involving $\Delta H_{(vap)} = 40850 J mol^{-1}$ at 373K is

a) $120 J mol^{-1} K^{-1}$ b) $9.1 \times 10^{-3} J mol^{-1} K^{-1}$ c) $109.52 J mol^{-1} K^{-1}$
d) $9.1 \times 10^{-4} J mol^{-1} K^{-1}$

85. The entropy change involved in the process of $H_2O (s) \rightarrow H_2O (l)$ at 0° C and 1 atm pressure involving $\Delta H_{fusion} = 6008 J mol^{-1}$ is.

a) $22-007 J mol^{-1} K^{-1}$ b) $22 - 007 mol K^{-1}$ c) $220 - 07J mol^{-1} K^{-1}$
d) $2 - 2007 J mol K^{-1}$

86. Entropy (S) and the entropy change (ΔS) of a process

a) are path functions b) are state functions c) are constant d) have no values

87. $H_2O (l) \rightarrow H_2O (g)$; in this process the entropy -----

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a) Remains constant b) decreases c) increases d) becomes zero

88. The entropy change for the process, water (liq) to water (vap) involving $\Delta H_{(\text{vap})} = 40850 \text{ J mol}^{-1}$ at 373 K is

a) $22.007 \text{ mol}^{-1} \text{ K}^{-1}$ b) $7.307 \text{ J mol}^{-1} \text{ K}^{-1}$ c) $109.52 \text{ mol}^{-1} \text{ K}^{-1}$
d) 0.2287 JK^{-1}

89. The percentage efficiency of a heat engine that operates between 127° and 27° C is.

a) 20% b) 50% c) 100% d) 25%

90. The network obtained from a system is given by

a) $W + P\Delta V$ b) $W - P\Delta V$ c) $-W + P\Delta V$ d) $-W - P\Delta V$

91. Thermodynamic condition for irreversible spontaneous process at constant T and p is.

a) $\Delta G < 0$ b) $\Delta S < 0$ c) $\Delta G > 0$ d) $\Delta H > 0$

92. The entropy change involved in the process water (liq) to water (vapour, 373K) involving $\Delta H_{\text{vap}} = 40850 \text{ J mol}^{-1}$ at 373 K is.

a) $10.952 \text{ J mol}^{-1} \text{ K}^{-1}$ b) $109.52 \text{ J mol}^{-1} \text{ K}^{-1}$ c) $100.952 \text{ J mol}^{-1} \text{ K}^{-1}$
d) $1095.2 \text{ J mol}^{-1} \text{ K}^{-1}$

93. According to Trouton's rule, the value of change in entropy of vaporization is.

a) $21 \text{ cal. Deg}^{-1} \text{ mole}^{-1}$ b) $12 \text{ cal. deg}^{-1} \text{ mol}^{-1}$ c) $21 \text{ K. cal, deg. mole}^{-1}$
d) $12 \text{ Kcal. deg. mol}^{-1}$

94. Free energy (G) and the free energy change ΔG correspond to the

a) system only b) surrounding only c) system and surrounding
d) all of these

95. Entropy is a ----- function

a) State b) path c) exact d) inexact

96. In S. I unit 1 EU is.

a) 41.84 EU b) 4.184 EU c) 418.4 EU d) 4184

97. For an isothermal process, the entropy change of the universe during a reversible process is.

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a) Zero b) more c) less d) none of the above

98. For an endothermic equilibrium reaction, if K_1 and K_2 are the equilibrium constants at T_1 and T_2 temperature respectively and if $T_2 > T_1$, then.

a) $K_1 < K_2$ b) $K_1 > K_2$ c) $K_1 = K_2$ d) none

99. At chemical equilibrium (PTA - 2)

a) $Q > K_c$ b) $Q < K_c$ c) $Q = K_c$ d) $Q = 1/K_c$

100. The active mass of 28g of nitrogen in 2 litres is.

a) 1M b) 0.5M c) 2M d) 4M

101. The catalyst used in the synthesis of SO_3 by contact process is.

a) Fe b) I_2 c) Mo d) V_2O_5

102. The relation between K_p and K_c of a reversible reaction is.

a) $K_c = K_p (RT)^{\Delta n_g}$ b) $K_p = K_c (RT)^{\Delta n_g}$ c) $K_p = K_c$ d) $K_p = 1/K_c$

103. $2H_2O_{(g)} + 2Cl_{2(g)} \rightleftharpoons 4HCl_{(g)} + 5O_{2(g)}$

a) $K_c = K_p$ b) $K_c > K_p$ c) $K_c < K_p$ d) $K_c = K_p = 0$

104. If the equilibrium constant for the formation of a product is 25, the equilibrium constant for the decomposition of the same product is.

a) 25 b) $\frac{1}{25}$ c) 5 d) 625

105. When Δn_g is a homogeneous gaseous equilibrium is positive, then

a) $K_c = K_p$ b) $K_c < K_p$ c) $K_c > K_p$ d) $K_c = K_p/2$

106. If the reversible reaction $2HI \rightleftharpoons H_2 + I_2$. K_p

a) Greater than K_c b) less than K_c c) equal to K_c d) zero

107. Which of the following gaseous equilibria is forward by increase in temperature?

a) $N_2O_4 \rightleftharpoons 2NO_2$; $\Delta H = +59 \text{ KJ mol}^{-1}$

b) $N_2 + 3H_2 \rightleftharpoons 2NH_3$; $-22 \text{ K cal mol}^{-1}$

c) $2SO_2 + O_2 \rightleftharpoons 2SO_3$; $\Delta H = -47 \text{ K cal mol}^{-1}$ d) both (a) & (b)

108. The maximum yield of ammonia by Haber's process is.

a) 78% b) 97% c) 37% d) 89%

109. In a reaction $2O_3 \rightleftharpoons 3O_2$ the value of K_c is.

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a) $\frac{[O]}{[O]}$

b) $\frac{[O]}{[O]}$

c) $\frac{[O]}{[O]}$

d) $\frac{[O]}{[O]}$

110. In the synthesis of NH_3 between N_2 and H_2 reaction the unit of K_p is -----

a) $\text{lit}^2 \text{mol}^{-2}$

b) atm^{-2}

c) lit atm^{-1}

d) atm^{-1}

MAN POWER CHEMISTRY COACHING

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3 marks Question - 2014

Class: X II

Marks: 150

Sub : Chemistry

Time : 3 hrs

1. Why He_2 is not formed?
2. What is bond order?
3. State Heisenberg uncertainty principle?
4. What is the significance of Negative electronic energy?
5. Define hybridization?
6. What is the condition for effective hydrogen bonding?
7. Prove that P_2O_5 is powerful dehydrating agent?
8. Why HF is not stored in silica or Glass bottles, write the equation?
9. What is plumbo solvency?
10. Write about the Holme's signal?
11. Write the uses of He_2 ?
12. Write the uses of Ne?
13. How is potash Alum is prepared?
14. How is phosphoric acid is prepared in the laboratory?
15. What is inert pair effect?
16. H_3PO_3 is diprotic why?
17. H_3PO_4 is Triprotic why?
18. Mention the uses of potash alum?
19. Write preparation of ClF , ClF_3 and IF_7
20. What is the action AgNO_3 . Write the equation?
21. Why do d – block element exhibits various oxidation state?
22. What is spitting of silver. How is it prevented?
23. Why Mn^{2+} is more stable than Mn^{3+} ?
24. What is the action of copper sulphate crystal?
25. Why do – block element forms complexes'?
26. Why are transition metals ions colored?
27. Write the action of aqua regia on Gold?
28. How is chrome plating done?
29. What is action of Zinc on hot NaOH ?
30. What is the reaction of CuSO_4 with KCN?
31. How are glass formed?
32. What are the superconductors?
33. Sketch i) SC ii) BCC iii) FCC

34. What is vitreous state? Example?
35. State Bragg's law?
36. Write the application of superconductor?
37. 39 – Thermodynamics?
38. State Le – chatelier's principle?
39. Dissociation of PCl_5 . Decrease in presence of increase in Cl_2 why?
40. Define reaction quotient?
41. What is the equilibrium constant?
42. What happens when $\Delta G = 0$, $\Delta G = \text{negative}$ $\Delta G = + \text{ve}$
43. Write the Arrhenius equation and explain terms?
44. What is opposing reaction give an Example
45. What is parallel reaction . eg?
46. What is consecutive reaction . eg?
47. Define order of reaction?
48. What is activation energy?
49. Write any two characteristic of 1st order reaction?
50. What is rietiemen reaction?
51. Give any three points of test for phenol?
52. Lederer manasse reaction?
53. Phenol how to react with ammonia?
54. How to prepare Terrylene (or) Dacron?
55. Coupling with diazonium chloride?
56. Kolbe's (or) Kolbe's schimidt reaction?
57. Dow process?
58. How can the consumption of alcohol by a person detected?
59. Alcohol cannot be used as solvent for Grignard reagent why?
60. Schotten Bauman?

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3. State Heisenberg uncertainty principle?
4. What is the significance of Negative electronic energy?
5. Define hybridization?
6. What is the condition for effective hydrogen bonding?
7. Prove that P_2O_5 is powerful dehydrating agent?
8. Why HF is not stored in silica or Glass bottles, write the equation?
9. What is plumbo solvency?
10. Write about the Holme's signal?
11. Write the uses of He_2 ?
12. Write the uses of Ne?
13. How is potash Alum is prepared?
14. How is phosphoric acid is prepared in the laboratory?
15. What is inert pair effect?
16. H_3PO_3 is diprotic why?
17. H_3PO_4 is Triprotic why?
18. Mention the uses of potash alum?
19. Write preparation of ClF , ClF_3 and IF_7
20. What is the action AgNO_3 . Write the equation?
21. Why do d – block element exhibits various oxidation state?
22. What is spitting of silver. How is it prevented?
23. Why Mn^{2+} is more stable than Mn^{3+} ?
24. What is the action of copper sulphate crystal?
25. Why do – block element forms complexes'?
26. Why are transition metals ions colored?
27. Write the action of aqua regia on Gold?
28. How is chrome plating done?
29. What is action of Zinc on hot NaOH ?
30. What is the reaction of CuSO_4 with KCN?
31. How are glass formed?
32. What are the superconductors?
33. Sketch i) SC ii) BCC iii) FCC

34. What is vitreous state? Example?
35. State Bragg's law?
36. Write the application of superconductor?
37. 39 – Thermodynamics?
38. State Le – chatelier's principle?
39. Dissociation of PCl_5 . Decrease in presence of increase in Cl_2 why?
40. Define reaction quotient?
41. What is the equilibrium constant?
42. What happens when $\Delta G = 0$, $\Delta G = \text{negative}$ $\Delta G = + \text{ve}$
43. Write the Arrhenius equation and explain terms?
44. What is opposing reaction give an Example
45. What is parallel reaction . eg?
46. What is consecutive reaction . eg?
47. Define order of reaction?
48. What is activation energy?
49. Write any two characteristic of 1st order reaction?
50. What is rietiemen reaction?
51. Give any three points of test for phenol?
52. Lederer manasse reaction?
53. Phenol how to react with ammonia?
54. How to prepare Terrylene (or) Dacron?
55. Coupling with diazonium chloride?
56. Kolbe's (or) Kolbe's schimidt reaction?
57. Dow process?
58. How can the consumption of alcohol by a person detected?
59. Alcohol cannot be used as solvent for Grignard reagent why?
60. Schotten Bauman?