

I-VOLUME IMPORTANT QUESTIONS,2019-2020

2 & 3 Marks:-

XII-STD

- 1.What is the difference between Minerals and Ores
- 2.What are the various steps involved in extraction of pure metals from their ores?
- 3.What is the role of Limestone in the extraxction of iron from its oxide Fe_2O_3
- 4.Which type of ores can be concentrated by froth floatation method ?Give two examples for such ores
- 5.Out of coke and CO which is better reducing agent for the reduction of ZnO why
- 6.Describe a method for refining nickel
- 7.Give the uses of Zinc
- 8.Explain the following terms with suitable examples i.Gangue ii.Slag
- 9.Give the limitations of Elingham diagram
- 10.What is Cyanide leaching
- 11.What is Auto reduction
- 12.Write a short note on anomalous properties of the first element of p-block
- 13.Give the uses of Borax
- 14.What is Catenation?Describ e briefly the catenation property of carbon
- 15.Write a note on Fisher troph synthesis
- 16.Give the strcture of CO and CO_2
- 17.Give the uses of silicones
18. $AlCl_3$ behaves like a lewis acid.Substantuate this statement
- 19.Write a short note on hydroboration
- 20.Give one example for each of the following
i.Icosogens ii.Tetragen iii.Pnitogen iv.Chalcogen
- 21.How will you identify borate radical
- 22.How will you convert boric acid to boron nitride
- 23.CO ios a reducing agent.Justify with an example
- 24.What are Alums?
- 25.What is Inert pair effect?
- 26.Which one is more soluble in diethyl ether anhydrous $AlCl_3$ or hydrated $AlCl_3$?Explain in terms of bonding
- 27.Chalcogens belongs to p-block.Give reason
- 28.Explain why fluorine always exhibit an oxidation state of $-I$
- 29.Give the oxidation state of halgen in the following i. OF_2 ii. O_2F_2 iii. Cl_2O_3 iv. I_2O_4
- 30.What are interhalogen compounds/Give examples
- 31.Why fluorine is more reactive than other halogens
- 32.Give the uses of helium
- 33.What is the hybrididsation of iodine in IF_7 .Give its structure
- 34.Give the uses of Sulphuric acid
- 35.Give a reason to support that sulphuric acid is a dehydrating agent
- 36.Write the reason for the anomalous behavior of nitrogen
- 37.Give the uses of argon
- 38.Give a reaction between nitric acid and a basic oxide
- 39.What happens when PCl_5 is heated?
- 40.Write the valence shall electronic configuration of group-15 elements

kindly send me your key Answers to our email id - padasalai.net@gmail.com

41. Give two equations to illustrate the chemical behaviour of Phosphine
42. $\text{Zn} + \text{dil HNO}_3 \longrightarrow \text{Zn} + \text{concHNO}_3 \longrightarrow$
43. Define Holme's signal
44. Define Aqua regia
45. What are Transition metals? Give four examples
46. What are Inner transition elements
47. What are Actinides? Give three examples
48. Why Gd^{3+} is colourless?
49. Explain why compound of Cu^{2+} are coloured but those of Zn^{2+} are colourless
50. What are Interstitial compounds? Write the electronic configuration of Ce^{4+} & Co^{2+}
51. Which is more stable? Fe^{3+} or Fe^{2+} explain
52. Out of $\text{Lu}(\text{OH})_3$ and $\text{La}(\text{OH})_3$ which is more basic and why?
53. Draw all possible geometrical isomers of the complex $[\text{Co}(\text{en})_2\text{Cl}_2]^{2+}$ and identify the optically active isomer
54. What is Linkage isomerism? Explain with an example
55. Define Unit Cell
56. Give any three characteristics of ionic crystals
57. Classify the following: i. P_4 ii. Brass iii. Diamond iv. NaCl v. Iodine
58. What are Point defects?
59. Explain Schottky, Frenkel defect
60. Calculate the number of atoms in a fcc unit cell
61. Why ionic crystals are hard and brittle
62. What is the two dimensional coordination number of a molecule in square close packed layer
63. What is meant by the term 'Coordination number' What is the coordination number of atoms in a bcc structure
64. Aluminium crystallizes in a cubic close packed structure. Its metallic radius is 125pm. Calculate the edge length of unit cell
65. Sodium metal crystallizes in bcc structure with the edge length of the unit cell 4.3×10^{-8} cm. Calculate the radius of sodium atom
66. What is Coordination number
67. Define the term: Space Lattice
68. What is F centre?
69. Define Bragg's Law
70. Define Average rate and Instantaneous rate
71. Define Rate law and rate constant
72. What is an elementary reaction? Give the difference between order and molecularity of a reaction?
73. Explain the effect of catalyst on reaction rate with an example
Write Arrhenius equation and Explain the terms involved
74. How do concentration of the reactant influence the rate of reaction
75. How do nature of the reactant influence rate of reaction
76. Define Pseudo first order reaction
77. Define Threshold energy and Activation Energy
78. Explain the role of depressing agents in froth floatation with an example
79. Give one test to differentiate the coordination compounds : $[\text{Co}(\text{NH}_3)_5 \text{Cl}]\text{SO}_4$ & $[\text{Co}(\text{NH}_3)_5 \text{Cl}]\text{SO}_4$

80. Oxides like Ag_2O and HgO undergo self reduction. Why?
81. Although Graphite and Diamond are allotropes of carbon, graphite is soft whereas diamond is hard. Why?
82. Mention the uses of Potash Alum
83. Give the schematic representation of proper and improper alignment of reactant for a general reaction
$$\text{A}_2 + \text{B}_2 \rightarrow 2\text{AB}$$
84. Classify molecular crystals with an example for each type
85. Describe the role of the following in the process mentioned:
i. Cryolite in the extraction of Aluminium ii. Iodine in the refining of Zirconium
86. Show that for a first order reaction, the time required for 99.9% completion of the reaction is nearly 10 times that required for half completion of the reaction
87. Explain the dehydrating property of sulphuric acid with suitable examples
88. Differentiate molecularity from order
89. Write the IUPAC of the following coordination compounds:
i. $\text{Na}_2[\text{Ni}(\text{EDTA})]$ ii. $[\text{Co}(\text{en})_3](\text{SO}_4)_3$ iii. $[\text{Pt}(\text{NH}_3)_2\text{Cl}(\text{NO}_2)]$
90. What are the main observations of Ellingham diagram
91. Derive the integrated equation for a zero order reaction $\text{A} \rightarrow \text{Products}$.
92. Calculate the percentage of ions present in the form of Fe^{3+}
93. Explain the bleaching action and oxidizing nature of chlorine with suitable example
94. Why do d-block elements readily form coordination compounds
95. In metallurgy roasting of ore is done below its melting points whereas smelting is done above its melting point

5 Marks:-

1. Zone Refining process
2. Electrometallurgy of Aluminium
3. Principle of electrolytic refining with an example
4. Electrochemical principles of metallurgy
5. Froth floatation process
6. Magnetic Separation with diagram
7. Structure of Diborane
8. Write a note on metallic nature of p-block elements
9. Write a note on Zeolites
10. Justify the position of Lanthanides and Actinides in the periodic table
11. What is Lanthanide contraction and what are the effects of lanthanide contraction?
12. Compare Lanthanides and Actinides
13. Compare the ionization enthalpies of first series of the transition elements
14. Give the differences between Double salts and Coordination compounds
15. Write the Postulates of Werner's Theory
16. What are limitations of VB Theory
17. Discuss briefly the nature of bonding in metal carbonyls
18. Explain briefly seven types of unit cell
19. Difference crystalline and amorphous solids
20. Distinguish between hexagonal and cubic close packing

kindly send me your key Answers to our email id - padasalai.net@gmail.com

- 21.Distinguish tetrahedral and octahedral voids
22. Write short note on metal excess and metal deficient defect with an example
- 23.Packing efficiency of BCC
- 24.Collision theory
- 25.Describe the graphical representation of first order reaction

******ALL THE BEST******

SRKV

**Prepared By:-
P.Aravindhan.MSc.,BEd.,(Chemistry)
SRKV Jain Mat Hr Mat Hr Sec School
Tirupattur,Vellore District.,**

kindly send me your key Answers to our email id - padasalai.net@gmail.com