pre board chemistry
Set-A.

Q. 1. Fill in the blanks:

1. Glass is example of .... solid.

2. In decomposition of hydrogen peroxide.............. acts as negative catalyst.

3. .... hormone control the level of sugar in blood.

4. Liebermann's nitroso reaction is done to identify .... amines.

5. .... used in the tyres of aeroplane.

Q. 2. Give answer in one sentence :

1. Which is the compound in which there is both Schottky and Frankel defect observed ?

2. Equation $\dfrac{-d[R]}{dt} = \dfrac{d[P]}{dt}$ express which rate of reaction?

3. In monel metal apart from Cu and Fe which other metal is used ?

4. Write down the equation of primary nitro alkane with nitrous acid.

5. Write down the name of any two inert gases.

Q. 3. Choose the correct Answer :

1. Bravais crystal lattice is of:

(a) 8 types (b) 12 types (c) 14 types   (d) 9 types.

2. Substance used in storage cell is :

(a) Copper (b) Silver (c) Lead   (d) Sodium.

3. Bio catalyst is :

(a) Amino acid (c) Nitrogen molecule

4. Ascorbic acid is :

(a) Vitamin C (c) Protein   .

5. Which of the following is a Bidente :

(a) EDTA (b) Ethylene Diamine (c) Acetate Ion   (d) Pyridine.

Q. 4. Match the following :

	'A'	'B'
1.	Hexagonal Crystal	(a) Choloropicrin
2.	Cellulose	(b) Iron Complex
3.	CCl_3NO_2	(c) CIF_3
4.	Haemoglobin	(d) Protein
5.	Inter Halogen	(e) Diamond Compound
		(f) Carbohydrate
		(g) Graphite.

Q. 5. Define the Micelles and Emulsion.

Or

Explain Auto catalyst with example.

Q. 6.   Give reason why fluorine always show-1 oxidation state.

Or

Ionization energy of noble gases is very high.

Q. 7. What is the effective atomic number of Fe is $K_4[Fe(CN)_6]$?

Or

Explain the meaning of Grignard reagent and give two examples.

Q. 8. What are Bio-molecules? Give two examples of its.

Or

Write any four names of Proteins.

Q. 9. On increasing the concentration of the reactions by 5 times the rate of a reaction gets increased by 25 times. Calculate the order of a reactions.

Or,

For dissociation of Ethyl Iodide, Rate constant at 600 K is $1-60 \times 10^{-5}$ S^{-1} and 700 K is $6-40 \times 10^{-3}S^{-1}$ calculate activation energy for this reaction.

Q. 10. Write four names of Copper and Iron ores with its formula.

Or

Explain the extraction of Zinc by vertical retort method by following points.

(i) Concentration   (ii) Roasting (iii) Reduction (iv) Purification

Q.11   Why the Bioling point of Ethyl Iodide is more than Ethyl Bromide ? Give Reason.

Or

Write the method of preparation of Freon and give properties and uses.

Q. 12   Complete the following reactions :

(i) $CH_3 - CH_2 -Br$ + Aqueous KOH → ?

(ii) $CH_3 - CHO + CH_3MgBr+$ → ?

(iii) $CH_3 - CHO \xrightarrow{\text{LiAlH}_4}$?

(iv) $C_6H_6 \xrightarrow{\text{Cl}_2}$?

Q.13   Write laboratory preparation of acetone chemical equation and labelled equation and labelled diagram.

Or

Write the names of General preparation of aldehydes.

Q.14   Describe Kohlrausch's law.

The equivalent conductivity at Infinite dilution for HCl, CH_3COONa and NaCl at 20^0C are 426, 91 and 126^-5 ohm$^-$1 cm^2 equivalent$^-$1 respectively with the help of these values calculate the equivalent conductivity of CH3COOH at Infinite dilution.

Or

Explain in brief the factors affecting the conductivity of electrolytic solution. Find out molar conductivity of aqueous solution of LiBr at Infinite dilution which ionic conductance of Li^+ ion and Br^- ion are 38^-7s com2 mol$^-$ and 78.48 scm2 mol$^-$1 respectively.

Q.15   What happens When :

(a) SO_2 gas is passed in acidic solutions of $KMnO_4$.

(b) SO_2 gas passed in acidic solutions $K_2Cr_2O_7$.

Or

(a) In laboratory ammonia is dried by quick lime only not by other dehydrating agents, why?

(b)   Boiling point of Ammonia is more then phosphing, why?

Q.16   Give the name of components of following medicinal plant:

(i)   Lahsun   (ii)   Bel   (iii)   Amla   (iv)   Kaju   (v)   Supari.

Or

Give examples of Disinfectants, antimicrobials, Antifertility and Anti-histamine drugs and explain them.

Q.17   (a)   Explain Azeotropic mixture? Write its types.

        (b)   What is antifreeze? Explain Osmosis and Osmotic pressure.

Or

In a Sucrose solution 68.4 gm sucrose and dissolved in 100 gm of water calculate the boiling point of the solution.

(B.P. of water – 373 K, Kb = 0.52 K kg mol⁻1 molecular mass = 342)

Q.18   (a) TiO_2 is colourless while $TiCl_3$ is coloured, explain logically.

        (b)   On the basis of electronic configuration. Explain the magnetic properties of transition elements.

Or

Complete the equation and balanced it.

(i) $KMnO_4 + KOH \rightarrow$?

(ii) $KMnO_4 + KI + H_2SO_4 \rightarrow$?

(iii) $KMnO_4 + H_2SO_4 + FeSO_4 \rightarrow$?