



CHEMISTRY

BOOKS - MBD -HARYANA BOARD

BOARD QUESTION PAPER -2019

(SOLVED)

Objective Type Questions

1. What is tincture of iodine ?

- A. 0.2 to 0.4 ppm aqueous solution of chlorine
- B. 2-3% aqueous solution of CH_3COOH
- C. 2-3% solution of iodine in alcohol-water
- D. None of the above

Answer:

 [View Text Solution](#)

2. What is hybridization of Ni in $[NiCl_4]^{2-}$?

A. SP^3d

B. dsp^2

C. sp^3d^2

D. sp^3

Answer: B



View Text Solution

3. which of the following organic compounds are formed by wurtz reaction ?

A. Alcohols

B. Hydrocarbons

C. Haloalkanes

D. Haloarenes

Answer: B



View Text Solution

4. Glycogen is an example of :

A. Polysaccharide

B. Disaccharide

C. Monosaccharide

D. protein

Answer: C



View Text Solution

5. According to Hardy - Schulze rule , which if the following has highest flocculating power?

A. Al^{3+}

B. Ba^{2+}

C. Na^+

D. None of the above

Answer: A

 [View Text Solution](#)

6. What type of stoichiometric defect is shown by ZnS ?

 [View Text Solution](#)

7. What do you mean by peptide linkage ?



[View Text Solution](#)

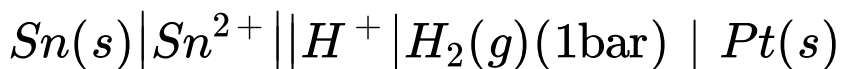
8. Define Azeotrope mixture



[View Text Solution](#)

9. Write the Nernst equation for following cell

:



 [View Text Solution](#)

10. Write the reaction of Cl_2 with water

 [View Text Solution](#)

11. Write IUPAC name of (p)



 [View Text Solution](#)

1. If the density of some lake water is 1.25 g mL^{-1} and contains 92 g of Na^+ ions per kg of water, calculate the molality of Na^+ ions in the lake.



[View Text Solution](#)

2. If a current of 0.5 ampere flows through a metallic wire for 2 hours , then how many electrons would flow through the wire ?



[View Text Solution](#)

3. Explain the term copolymerization and give two examples.



[View Text Solution](#)

4. What do you mean by denaturation of a protein ? How does it affect properties of protein ?



[View Text Solution](#)

5. It is safe to inject solutions isotonic with blood plasma intravenously. Explain.



[View Text Solution](#)

6. While giving labelled diagram of dry cell write reactions taking place at cathode and anode.



[View Text Solution](#)

7. Why does nitrogen show catenation properties less than phosphorus ?

 [View Text Solution](#)

8. Although amino group is o- and p-directing in aromatic electrophilic substitution reactions, aniline on nitration gives a substantial amount of mnitroaniline. Give reason.

 [View Text Solution](#)

9. Write a short note on Hofmann's bromamide reaction.



[View Text Solution](#)

Short Answer Type Questions

1. (a) What is meant by Hydroboration-oxidation reaction ? Illustrate it with an example.

(b) Predict the major product of acid catalysed dehydration of 1-methylcyclohexanol.



[View Text Solution](#)

2. Explain $[Co(NH_3)_6]^{3+}$ is an inner orbital complex whereas $[Ni(NH_3)_6]^{2+}$ is an outer orbital complex.



[View Text Solution](#)

3. Define the following with suitable examples:

(a) F-centres,

(b) Antiferromagnetism.



[View Text Solution](#)

4. (a) The rate constants of a reaction at 500 K and 700 K are 0.02 s^{-1} and 0.07 s^{-1} respectively. Calculate the value of E_a .

(b) Under what condition a bimolecular

reaction behaves kinetically first order reaction ?



[View Text Solution](#)

5. Why is the extraction of copper from pyrites more difficult than that from its oxide ore through reduction ?



[View Text Solution](#)

6. Although chlorine is an electron withdrawing group, yet it is ortho-para directing in electrophilic aromatic substitution reactions, why ?



[View Text Solution](#)

Long Answer Type Questions

1. (a) How will you distinguish between Pentan-2-one and Pentan-3-one with the help

of Iodoform test?

(b) How will you bring about following conversions ?

(I) Benzoic acid to m-Nitrobenzyl alcohol.

(II) Benzaldehyde to Benzophenone.

(iii) Benzoic acid to Benzamide.



[View Text Solution](#)

2. Describe the following:

(a) Aldol condensation

(B) Decarboxylation.



3. (a) Arrange the following in the order of property indicated for each set :

(I) F_2, Cl_2, Br_2, I_2 - Increasing bond dissociation enthalpy.

(II) HF, HCl, HBr, HI - Decreasing acid strength.

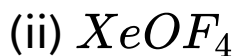
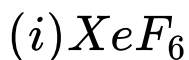
(III) $NH_3, PH_3, AsH_3, SbH_3, BiH_3$ - Decreasing base strength.

(b) Write the conditions to maximize the yield of H_2SO_4 by contact process.



[View Text Solution](#)

4. (a) Draw the structure of following:



(b) Describe the Haber process for manufacture of ammonia.



[View Text Solution](#)

5. (a) Why are Mn^{2+} compounds more stable than Fe^{2+} towards oxidation to their + 3

state?

(b) What are interstitial compounds ? Why are such compounds well-known for transition metals ?

(c) Write electronic configuration of Pm^{3+} .



[View Text Solution](#)

6. (a) Write ionic equations for the reaction of acidified potassium permanganate with following:

(i) Oxalic acid, (ii) H_2S ,

(iii) Sulphite ion.

(b) Describe the reactivity of actinoids.



View Text Solution