# 10th class chemistry Guess Paper 2023

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### Unit 9

### **Important Short Questions**

- 1. Reversible & irreversible reaction
- 2. Dynamic equilibrium & Static equilibrium
- 3. Law of mass action
- 4. Equilibrium constant
- 5. How dynamic equilibrium constant is established
- 6. Relationship b/w active mass and rate of reaction
- 7. How direction of a reaction can be predicted?

# Important long questions:

- 1. What is meant by a complete & incomplete reaction? Why reactions do not go to completion?
- 2. Give the macroscopic characteristics of forward reactions, reverse reactions & dynamic equilibrium.
- 3. State the law of mass action and derive the expression for the equilibrium constant for a given reaction A +B>< C+D / general reaction.
- 4. Explain the importance of equilibrium constant.
- 5. Describe a reversible reaction with the help of an example & graph.

### <u>Unit 10</u>

# **Important Short Questions**

- 1. Define Acid & base according to Arrhenius.
- 2. Write limitations of Arrhenious concept.
- 3. What is Bronsted Lowry Theory?
- 4. Differentiate b/w Lewis acid & base.
- 5. Why H+ ion acts as a Lewis acid?
- 6. Give four uses of sulphuric acid.
- 7. Define pH. What is the pH of pure water?
- 8. Define pH of solution.
- 9. Define indicators.
- 10. What are salts? Give two examples.
- 11. Give four uses of salts.
- 12. Write four uses of sodium silicate, calcium chloride, calcium oxide
- 13. Differentiate b/w acidic salts & basic salts.

### Important long questions:

1. Compare the physical properties of acids & bases with examples.

- 2. Explain the Arrhenius concept of acids & bases with examples. What are limitations of this concept?
- 3. Explain Lewis concept of an acid & a base.
- 4. What are indicators? How they are used to determine pH of acidic, basic and neutral solutions.
- 5. Define salts. Explain their characteristics and uses of some important salts.
- 6. Give the application/uses of some important bases.
- 7. Explain Bronsted Lowry concept of an acid and base with examples.

### <u>Unit 11</u>

### **Important Short Questions**

- 1. Define Vital force theory.
- 2. Write definition of organic compounds
- 3. Define Catenation.
- 4. Briefly explain molecular formula with example.
- 5. Write functional group of alcohol.
- 6. How coal is formed?
- 7. Define functional group.
- 8. What is dot & cross formula?
- 9. Define open chain/acyclic compound.
- 10. Define alicyclic/Non-Benzenoid compounds.
- 11. Define Heterocyclic compounds with example
- 12. Define isomerism. How many isomers pentane have?

### Important long questions: (Skip this part. No long question will come from this chapter in 2022)

- 1. Write a note on the classification of organic compounds.
- 2. Compare the general characteristics of organic & inorganic compounds.
- 3. Define homologous series. Write its characteristics.
- 4. Define functional group. Explain the functional group of alcohols, ethers, aldehydes, ketones, carboxylic acid, esters, etc.
- 5. Explain the meaning of molecular formula, structural formula, condensed structural formula & electronic formula.

### Unit 12

### **Important Short Questions**

- 1. Define hydrocarbons.
- 2. Define open chain hydrocarbons & Closed chain hydro carbons
- 3. What are Saturated & unsaturated hydrocarbons?
- 4. Why alkanes are called "Paraffin's"?

- 5. What is meant by Hydrogenation of alkenes?
- 6. Give Uses of ethane & ethane.

### Important long questions:

- 1. Define hydrocarbons. How are they classified?
- 2. Explain methods for preparation of alkanes & alkenes.
- 3. Discuss physical properties of alkenes & alkynes.
- 4. Write uses of ethane, ethane, methane & acetylene.
- 5. Give chemical reactions of alkanes.

### **Unit 13**

### **Important Short Questions**

- 1. Define Biochemistry.
- 2. Define Polysaccharides & give their properties
- 3. write Characteristics of monosaccharide's
- 4. Define amino acid. Give its general formula.
- 5. Differentiate b/w essential & non essential amino acids.
- 6. Write Sources & uses of vitamin A, Vitamin D.
- 7. Carbohydrates & their uses
- 8. Difference b/w ghee & oil
- 9. Function of DNA
- 10. Types of vitamins
- 11. How you justify RNA works like a messenger?

### Important long questions:

- 1. Define monosaccharide's & oligosaccharides. Give their characteristics.
- 2. Give uses and sources of carbohydrates.
- 3. Define amino acid. Explain how are they building blocks of proteins?
- 4. Explain the sources & uses of proteins & lipids.
- 5. Define vitamins. Discuss the types, sources, uses & importance of vitamins. Also write the effects of deficiency of vitamins.
- 6. What are carbohydrates? How monosaccharide's are prepared?

### Unit 14

### **Important Short Questions**

- 1. Atmosphere & its spheres
- 2. Diff. b/w atmosphere & environment
- 3. Name the major constituents of troposphere
- 4. Define pollutants. Differentiate b/w primary & secondary pollutants.
- 5. Green house effect
- 6. Global warming & its effects

- 7. Why CO2 is called green house gas?
- 8. CO2 is responsible for heating up atmosphere, how?
- 9. Effects of acid rain
- 10. Define Ozone hole & where was it notices first?
- 11. Effects of ozone depletion
- 12. Where the ozone layer is found?
- 13. How acid rain increase the acidity of soil?
- 14. Why CO is considered a health hazard?
- 15. How sulphur containing compound are emitted naturally?

### Unit 15

### **Important Short Questions**

- 1. How water rises in plants?
- 2. Four properties of water
- 3. Define capillary action
- 4. Why the water molecule is polar?
- 5. Soft water & hard water
- 6. How temporary hardness of water can be removed by Clark's method?
- 7. Define boiler scales. How are they removed?
- 8. Why are pesticides & fertilizers used?
- 9. Why non-polar compounds are insoluble in water?
- 10. How water rises in plants?
- 11. Disadvantages of detergents.
- 12. Name some water borne diseases.
- 13. Define Fluorosis.

# **Important Long Questions**

- 1. Causes of hardness in water and methods to remove hardness
- 2. Industrial effluents and their effects
- 3. Effects of water pollution
- 4. Write a note on waterborn diseases

### **Unit 16**

### **Important Short Questions**

- 1. Define metallurgy.
- 2. Difference b/w Minerals & Ores.
- 3. State gravity separation
- 4. Electromagnetic separation
- 5. Define Roasting. How is it carried out?
- 6. Raw materials of Solvey's process
- 7. Advantages of Solvey's process
- 8. Petroleum
- 9. Formation of petroleum
- 10. How roasting is carried out?
- 11. Difference b/w crude oil & residual oil
- 12. Difference b/w diesel oil & fuel oil.
- 13. Which raw material are used in the manufacturing of urea?
- 14. How NaHCO3 is converted in Na2CO3?

# Important Long Questions 1. Electromegnatic separation (Smelting, bessemerization) 2. Manufacture of sodium carbonate by Solvay's process (reactions, advantages) 3. Process of manufacture of Urea (3 basic steps)