

**10<sup>th</sup> CLASS CHEMISTRY GUESS PAPER 2022.**

**EXAM HELD IN 06-05-2022**

**UNIT NO. 9: CHEMICAL EQUILIBRIUM.**

**SHORT QUESTIONS.**

1. Define Reversible reaction.
2. Describe some properties of reversible reaction.
3. Differentiate between reversible and irreversible reaction. Explain with example.
4. How Dynamic equilibrium established?
5. Define Chemical equilibrium state.
6. Compare macroscopic properties of forward and reverse reactions.
7. Write down two characteristics of irreversible reaction.
8. Define complete reaction.
9. Describe law of mass action and write its equation.
10. What is meant by active mass?
11. Define Equilibrium constant.
12. What is meant by extent of reaction?

**LONG QUESTIONS.**

1. Differentiate between forward and reverse reaction.
2. State the law of mass action and derive the expression for equilibrium constant for a general reaction.
3. How do you predict the direction of reaction with the help of equilibrium constant?

**UNIT NO. 10 ACID, BASES AND SALTS.**

**SHORT QUESTIONS.**

1. Write four properties of bases.
2. Describe Arrhenius concept of acid and base.
3. Write down the limitations of Arrhenius concept of acid and base.
4. Define Amphoteric and give example.
5. What is difference between conjugate acid and conjugate base?
6. What is meant by pH. Give its uses.
7. Write neutralization reaction according to Lewis theory.
8. Why  $H^+$  ion act as a Lewis Acid.
9. Write names and formulae of two mineral acids.
10. Write two uses of Sulphuric and Nitric acid.
11. Write name of any two acids use in synthesis of fertilizers.
12. Define pH and what pH of pure water is.
13. Describe two important characteristics of salts.
14. Define salt and types of salt.
15. What is Neutralization? Also give an example.
16. Write two uses of sodium carbonate.
17. Define indicator and universal indicator.
18. What is acid rain?
19. Name an acid used in the preservation of food.
20. Difference between Lewis acid and Lewis base.

**LONG QUESTIONS.**

1. Explain Lowery-Bronsted concept of acids and base.
2. Describe Lewis Concept of Acid and base.
3. Write down the uses of following:  $NaCl$ ,  $CaCO_3$ ,  $MgO_2$ ,  $AlH$
4. Difference between acidic and basic salt.
5. What is meant by pH give the uses.

## **UNIT NO. 11            ORGANIC CHEMISTRY**

### **SHORT QUESTIONS.**

1. Write condense formula of any two hydrocarbon.
2. What are organic compound.
3. What is meant by structure formula? Explain with example.
4. What are aromatic compound? Give an example.
5. Compare open chain and closed chain compound with example.
6. How coal is formed.
7. Define carbonization.
8. Classification of Coal
9. Write the importance of Natural gas.
10. How are alkyl radical formed. Explain with example.
11. Write the characteristics of Homologues series.
12. What is functional group give two example.
13. What is meant by ester linkage?
14. Define Petroleum
15. Difference between primary and tertiary alcohol
16. What is the term by catenation?
17. Define Isomerism.
18. Difference between n –propyl and isopropyl radical.
19. Difference between aldehyde and ketonic functional group.

### **LONG QUESTIONS.**

1. Write down character of Homologous series.
2. Define functional group. Write general formula of functional group and alcohol.
3. Describe the test to identity carboxylic group.

**CHAPTER NO. 12** **HYDROCARBON.**

**SHORT QUESTIONS.**

1. Define hydrocarbon give the example.
2. Difference between saturated and unsaturated hydrocarbon.
3. Why alkanes called paraffin.
4. Write an equation of preparation of ethane.
5. Describe uses of methane and ethane.
6. What do you know about halogenation of alkanes?
7. Why alkanes are reactive?
8. Write two uses of ethene.
9. Why alkenes called is olefins.
10. What is addition reaction? Give examples.
11. Why are the alkanes used as fuel?
12. Write two uses of acetylene.
13. Name the gas liberated when alkalis react with ammonia salt.

**LONG QUESTIONS.**

1. Write three uses of Ethene
2. Write down any five physical properties of alkanes.
3. Describe five uses of Ethene.
4. Write down uses of acetylene

**CHAPTER NO. 13** **BIOCHEMISTRY.**

**SHORT QUESTIONS.**

1. What are carbohydrates? Also write general formula.
2. What is the basic unit of carbohydrates and how are they synthesized?
3. What is difference between glucose and fructose?
4. Write physical properties of monosaccharide's.
5. Write characteristics of oligosaccharides.
6. How do you justify that the amino acids are the building blocks of proteins.
7. What is difference between ghee and oil?
8. Write down two characteristics of fats.
9. What is function of DNA?
10. What is the function of RNA?
11. Write the source of vitamin A and D.
12. Write down disease occur by the deficiency of vitamin.
13. Describe important of vitamin.
14. How do plants synthesize carbohydrates?

**LONG QUESTIONS.**

1. Describe four uses and sources of carbohydrates.
2. What are lipids? Write their sources and uses.
3. Write down DNA.
4. Write down the sources and diseases due to deficiency of some fat soluble vitamin.

**UNIT NO. 14                      ATMOSPHERE**

**SHORT QUESTIONS**

1. What is stratosphere?
2. What is the temperature range of stratosphere and mesosphere?
3. Write down the name of stratosphere's regions.
4. Difference between primary and secondary pollutants of air.
5. Why CO<sub>2</sub> is called a greenhouse gas?
6. Write two effect of global warming.
7. What threats are human health due to SO<sub>2</sub> gas as air pollutants?
8. Write effects of ozone depletion.
9. How is ozone layer formed in stratosphere?

**LONG QUESTIONS.**

1. What is green –house effect? Explain it.
2. What is acid rain and how it is formed?

**UNIT NO. 15                      WATER.**

**SHORT QUESTIONS.**

1. Write four properties of water.
2. What is capillary action?
3. Write effects of temporary hardness of water.
4. Write disadvantages of detergents.
5. Difference between biodegradable and non –biodegradable substance.
6. What is jaundice? Give its symptoms.
7. How water borne disease can be prevented?
8. What are dysentery and typhoid?
9. What is the reason of jaundice and typhoid?
10. What are pesticides used.
11. How does Sodium zeolite soften hard water?

**LONG QUESTIONS.**

1. Describe two methods to remove permanent hardness.
2. Describe the methods to remove temporary hardness.
3. Write a note on Cholera and Hepatitis diseases.

**UNIT NO. 16 CHEMICAL INDUSTRIES.**

**SHORT QUESTIONS.**

1. Define Metallurgy.
2. Describe froth flotation process.
3. Name any two process which involved in metallurgy for extraction of a metal in the pure state from its ore.
4. Write the formulae of matte and urea.
5. Write down the name of any two raw material used for Solvay's process.
6. Write two advantages of Solvay's process.
7. How  $\text{NaHCO}_3$  is converted into  $\text{Na}_2\text{CO}_3$ ?
8. How ammonia is prepared by Haber's process.
9. Write uses of Petroleum ether.
10. Write down the name of different fractions of petroleum.
11. Define petroleum and crude oil.
12. Difference between diesel oil and fuel oil.

**LONG QUESTIONS.**

1. What is meant by Ore. Describe three methods for concentration of ores?
2. Write three advantages of Solvay process.
3. State process of the preparation of Urea.
4. Write a note on fractional distillation of petroleum?