



Class: XII

MODEL PAPER FOR EXAMINATION 2024

Time Allowed: 20 minutes

SUBJECT: CHEMISTRY

Q1:

(SECTION "A")

Marks: 17

Note: Attempt all questions from section 'A'. Each question carries **ONE** mark.

- The number of neutron in deuterium is
A. 0 B. 1 C. 2 D. 3
- Hydrogen at the time of its liberation is known as
A. Ordinary Hydrogen B. Stable Hydrogen C. Nascent Hydrogen. D. Heavy Hydrogen
- What is pH of Lemon Juice?
A. 3.8 B. 5.5 C. 6.6 D. 2.5
- Which of the following compounds has a triple bond?
A. C₂H₆ B. C₃H₄ C. C₃H₈ D. C₃H₆
- The metal present in Grignard reagent is.
A. Mg B. Mn C. Fe D. Cu
- CO₂ when passed in excess, in lime water turns colorless again because of:
A. Calcium Carbonate B. Calcium bicarbonate C. Calcium Chloride D. Copper Carbonate
- The chemical formula of Urea is _____.
A. (NH₄)₂CO₂ B. (NH₂) CO C. (NH₄)₂CO D. NH₂CONH₂
- Retinal is also called
A. Vitamin A B. Vitamin B C. Vitamin C D. Vitamin D
- The general formula of Ester is ?
A. RCOOH B. RNH₂ C. RCOOR D. RCOR
- Which of the following metals reacts with steam to form a metal oxide and hydrogen?
A. Copper B. Silver C. Lead D. Aluminum
- Which of the following is an example of thermosetting plastics?
A. Polythene B. Bakelite
C. Polyvinyl chloride (P.V.C) D. More than one of the above.
- To which category of reactions does the following chemical reaction belong?
NaCl(aq) + AgNO₃(aq) → NaNO₃(aq) + AgCl(s)
A. Double displacement reaction B. Redox reaction
C. Displacement reaction D. Combination reaction
- Blood Cancer is caused by
A. Methane B. Ethane C. Benzene D. Butane
- The ratio of the mass of hydrogen to the mass of oxygen in water is always _____.
A. 2 : 1 B. 1 : 8 C. 8 : 1 D. 1 : 2
- Chemical name of washing soda is:
A. Sodium chloride B. Sodium hydrogen carbonate
C. Sodium carbonate D. Sodium hydroxide
- ____ is a process in which impure water is boiled and the steam is collected and condensed in a separate container, leaving many of the solid contaminants behind.
A. Decantation B. Distillation C. Sedimentation D. More than one of the above
- What is the IUPAC name of sec-Butyl chloride?
A. 2-Chlorobutane B. Tri chloro methane C. 3-Bromopropene D. More than one of the above

END OF SECTION A

Class: XII HIGHER SECONDARY SCHOOL CERTIFICATE ANNUAL (II) EXAMINATION 2023

Time: 2 hours 40 minutes SUBJECT: CHEMISTRY (SECTION "B" AND SECTION "C")

Total Marks 68

SECTION "B" (SHORT ANSWER QUESTIONS)

36 Marks

Q2:

Note: Attempt any **NINE-PART** questions from this section. Each question carries **FOUR** marks.

Inorganic chemistry

- Write the group and period of the following
A. Z=18 B. Z=24 C. Z=34 D. Z=47
- What is Aqua Regia? How does gold dissolve in it?
- Describe the extraction of sodium metal by Down's process?
- Upon moving left to right in 3rd period, nature of oxides changes from basic to amphoteric to acidic, why?
- High percentage of CO₂ is responsible for climate changes. Why?
- Write the IUPAC name of the following
A. H(AuCl₄) B. Na₃{Ag(C₂O₄)₂} C. {Pb (OH)₄}
- What is heavy water? Why it is called heavy?



Organic chemistry

8. Write the mechanism of benzene with any two of the following
- Friedel-Craft alkylation
 - Friedel-Craft acylation
 - Nitration and Sulphonation
 - Bromination
9. Define the following.
- A. Cracking B. Functional Group C. Zwitter Ions D. Isomerism.
10. What is polymerization? How many types of polymers are there? Give examples also
11. Give the molecular orbital structural of benzene.
12. Explain electrophile substitution reaction in benzene with refers to halogenations.
13. Define polymerization. how many types of polymers are there? Define with example.
14. Write the classification of organic compound with example.

SECTION "C" (DETAILED ANSWER QUESTIONS)

32 Marks

Note: Attempt any **TWO-PART** questions from this section. Each questions carry **SIXTEEN** marks. Draw diagram where necessary.

Q.3

Inorganic chemistry

- a) Write down the chemical formula of the following.
- * Lime stone * Gypsum salt * Epsom salt * Quick lime * Baking soda * Rock salt
- b) Give the preparation of bleaching powder by Hasen clever, process
- c) Describe the manufacturing of chlorine gas by nelson cell method.

Q4.

- (a) How is blister copper obtained from matter?
- (b) Give the preparation of bleaching powder by Hasen clever process
- (C) What are Hybrides? How are they Classified?

Organic chemistry

- Q5. (a) Describe the stability of benzene ring give the molecular orbital structure of benzene
- (b) Write the Structural formula
- * Nicotinic Acid * Glycerol * α - Naphthol
- (c) Define fermentation? How ethanol manufactured by molasses.
- Q6. a.) What is fermentation process? Explain the manufacture of ethanol from starch or Molasses.
- b.) Define isomerism. Explain its types with suitable example.
- c.) Complete and balance following chemical equations.
- $\text{H-CHO} + \text{NaOH}$
 - $\text{CH}_3\text{-COCl} + \text{CH}_3\text{COONa}$
 - $\text{CH}_3\text{COOC}_2\text{H}_5 + \text{HOH}$
 - $\text{C}_6\text{H}_5\text{-OH} + \text{HNO}_3(\text{at } 250^\circ\text{C})$
 - $\text{H} - \text{CH}=\text{O} + 2[\text{Ag}(\text{NH}_3)_2]\text{OH}$

END OF PAPER