

Model Paper 12th Class - 2024

CHEMISTRY

TIME: 20 MINUTES

OBJECTIVE

MARKS: 17

NOTE: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the Circle. Cutting or filling two or more circles will result in zero mark in that question.

- i. The elements in periodic table are classified into blocks:
(A) 1 (B) 2
(C) 4 (D) 3
- ii. Choose the correct electronic configuration of Ca:
(A) $[\text{Ar}] 2s^2$ (B) $[\text{Ar}] 4s^2$
(C) $[\text{Ne}] 3s^2$ (D) $[\text{Ne}] 4s^2$
- iii. Tincal is a mineral of:
(A) Aluminium (B) Magnesium
(C) **Boron** (D) Carbon
- iv. The catalyst used in contact process is:
(A) Fe_2O_3 (B) V_2O_5
(C) Ag_2O (D) SO_3
- v. The Hydrogen bonding is strongest in following
(A) **HF** (B) HBr
(C) HCl (D) HI
- vi. The total transition elements are:
(A) 10 (B) 14
(C) 20 (D) **58**
- vii. One of the following is a typical transition element:
(A) **Co** (B) Sc
(C) Y (D) Ra
- viii. Linear shape is associated with which of the following hybrid orbital:
(A) **sp** (B) sp^2
(C) sp^3 (D) dsp^2
- ix. Formula of trichloromethane is:
(A) CH_3Cl (B) CH_2Cl_2
(C) CHCl_3 (D) CCl_4
- x. The conversion of n-Hexane into benzene is called as:
(A) **Aromatization** (B) Dealkylation
(C) Rearrangement (D) Isomerization
- xi. When CO_2 is made to react with ethyl magnesium bromide followed by acid hydrolysis the product formed is:
(A) Acetic acid (B) Formic acid
(C) **Propanoic acid** (D) Methanol
- xii. Ethanal can be converted into ethanoic acid by:
(A) Hydrogenation (B) **Oxidation**
(C) Hydration (D) Fermentation
- xiii. The hybridization of oxygen atom in carbonyl group is:
(A) sp (B) sp^2
(C) sp^3 (D) dsp^2
- xiv. Choose one of the synthetic polymers from the following:
(A) Starch (B) Animal fat
(C) Cellulose (D) **Polyester**
- xv. Which of the following element is not present in all proteins:
(A) **S** (B) N
(C) C (D) H
- xvi. Newspapers can be recycled again and again by how many times:
(A) 2 (B) **5**
(C) 4 (D) 3
- xvii. Which of the following is not a calcareous material:
(A) Lime (B) **Clay**
(C) Marble (D) Marine shell

(4)

Model Paper 12th CLASS –2024

CHEMISTRY

SUBJECTIVE
SECTION-I

TIME: 2 HRS 40 MINUTES
MARKS: 68

2. Write short answers to any EIGHT questions.

(2 x 8 = 16)

- i. Why noble gases have usually zero oxidation?
- ii. Write down any four uses of Aluminum.
- iii. What is white lead ?
- iv. What is iodized salt?
- v. What are freons and Teflon?
- vi. Explain the variation in melting and boiling points in short periods?
- vii. Differentiate between Thermoplastic and Thermosetting plastic.
- viii. Draw the structure of glucose.
- ix. Write down any two properties of lipids.
- x. How detergents are affecting the marine life.
- xi. What are leachates?
- xii. How are Chloroflourocarbons destroying ozone layer?

3. Write short answers to any EIGHT questions.

(2 x 8 = 16)

- i. Differentiate between alicyclic and acyclic compounds.
- ii. Draw the various isomers of C_4H_{10} .
- iii. Convert Methane into Nitromethane.
- iv. State Markownikoff Rule with an example.
- v. Write down any four uses of Ethyne.
- vi. How NO_2 is act as oxidizing agent.
- vii. How Aqua Regia dissolved gold?
- viii. How does nitrogen differ from other members of its group?
- ix. How ethyl chloride converted into n-butane by Wurtz Synthesis.
- x. Define nucleophilic substitution reaction.
- xi. Write down any two essential qualities of good fertilizer.
- xii. Mention the role of Phosphorous in the growth of plants.

4. Write short answers to any SIX questions.

(2x6=12)

- i. What is central metal ion?
- ii. Give systematic name of (i) $K_2[PtCl_6]$ (ii) $[Pt(OH)_2(NH_3)_4]SO_4$
- iii. How will you distinguish methanol and ethanol?
- iv. What is Dow's method .
- v. Draw the structural formulas of (i) Carboic Acid (ii) Cyclohexanol.
- vi. What is sodium nitroprusside test?
- vii. What is formalin?
- viii. Briefly describe the acidic and basic character of amino acids.
- ix. What are fatty acids. Give two examples.

(SECTION - II)

Note: Attempt any three from the following.

(8x3=24)

5. (A) Define electron affinity. Discuss its trend in periodic table.
(B) Discuss any two methods of preparation of borax?
6. (A) Write down any four dissimilarities of oxygen and Sulphur.
(B) Define smog. Write down its conditions of formation.
7. (A) Explain Cis –Trans isomerism in detail.
(B) Explain unimolecular nucleophilic substitution reaction.
8. (A) Write a note on Atomic orbital treatment of Benzene.
(B) How ethanol is prepared by molasses.
9. (A) Write any four methods of preparation of alkanes.
(B) Define Aldol Condensation with Mechanism.