

**Chemistry Part-II**

Fig. No. \_\_\_\_\_

**Chemistry Part-II**

Fig. No. \_\_\_\_\_

**SECTION "A"**

Time: 20 Min

Marks: 18

**NOTE: Use this sheet for this section. No marks will be awarded for cutting, erasing or overwriting.**

Q1. Choose the correct answer from the given choices i.e. (a, b, c, d) and insert into the relevant box.

- (i). Helium is present in group \_\_\_\_\_  
 (a) I (b) II (c) VIII (d) VII
- (ii). Down's cell electrolysis is used for extraction of \_\_\_\_\_  
 (a) Na (b) Mg (c) Li (d) Ca
- (iii). Borax is an ore of \_\_\_\_\_  
 (a) Al (b) B (c) C (d) None of these
- (iv).  $\text{AlF}_3$  compound is \_\_\_\_\_  
 (a) Covalent (b) Partly ionic (c) Ionic (d) None of these
- (v).  $\text{Na}^+$  is isoelectronic with \_\_\_\_\_  
 (a)  $\text{Cl}^-$  (b)  $\text{F}^-$  (c)  $\text{K}^+$  (d)  $\text{Mg}^{+2}$
- (vi). Thermite process is \_\_\_\_\_  
 (a) Exothermic (b) Endothermic (c) Reversible (d) None of these
- (vii). Formula of laughing gas is \_\_\_\_\_  
 (a) NO (b)  $\text{NO}_2$  (c)  $\text{N}_2\text{O}$  (d)  $\text{N}_2\text{O}_3$
- (viii). Bleaching powder has a smell of \_\_\_\_\_  
 (a) Water (b) Fluorine (c) Bromine (d) Chlorine.
- (ix).  $\text{KMnO}_4$  is an \_\_\_\_\_  
 (a) Oil (b) Acid (c) Oxidizing agent (d) Ester
- (x). Hybridization of carbon in Ethyne is \_\_\_\_\_  
 (a)  $\text{Sp}$  (b)  $\text{Sp}^2$  (c)  $\text{Sp}^3$  (d)  $\text{Sp}^3\text{cl}^2$
- (xi). Which one is vicinal halide?  
 (a)  $\text{CH}_3\text{Cl}$  (b)  $\begin{array}{c} \text{CH}_2-\text{CH}_2 \\ | \quad | \\ \text{Cl} \quad \text{Cl} \end{array}$  (c)  $\text{CH}_3-\text{CH}_2-\text{Cl}$  (d)  $\text{Ccl}_4$
- (xii). Meta directing group is \_\_\_\_\_  
 (a) OH (b)  $\text{NH}_2$  (c) -OR (d) -CHO
- (xiii). The number of tertiary carbon atoms in tertiary butyl alcohol is \_\_\_\_\_  
 (a) 4 (b) 3 (c) 1 (d) 2
- (xiv). Ethylene undergoes \_\_\_\_\_  
 (a) Electrophilic addition (b) Nucleophilic addition (c) Elimination reaction (d) None of these
- (xv). Carboxylic acid contains \_\_\_\_\_  
 (a) Hydroxyl & carboxyl group. (b) Hydroxyl group. (c) Carboxyl group  
 (d) Carboxyl & aldehydic group
- (xvi). Important reactions of benzene are \_\_\_\_\_  
 (a) Nucleophilic substitution. (b) Electrophilic substitution. (c) Electrophilic addition  
 (d) None of these.
- (xvii). In  $\text{C}_6\text{H}_5\text{COOH}$  the second substituent occupies \_\_\_\_\_  
 (a) Meta position (b) Ortho position (c) Para position (d) O/P position
- (xviii). Reaction of Alcohol and Sodium produces \_\_\_\_\_.  
 (a) Alkoxide (b) Aldehyde (c) Ethene (d) Ethane

**Chemistry Part-II**

Time: Allowed: 2.40h

Max. Marks: 67

**SECTION "B"**

Marks: 40

**Q2. Attempt any TEN questions. Each question carries equal marks.**

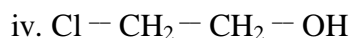
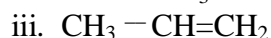
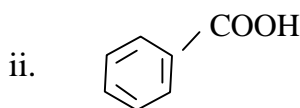
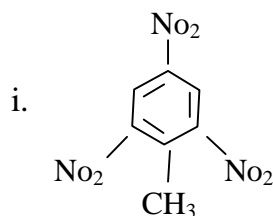
- (i) How does Hydrogen differs from alkali metals?
- (ii) Why alkaline earth metals are hard compared to alkali metals?
- (iii) What is Aqua Regia? How it dissolves noble metals?
- (iv) How does modern periodic law differs from Mendeleev's law?
- (v) Explain the chemical properties of Al? Give reactions.
- (vi) What are p-type and n-type semiconductors?
- (vii) Explain the anomalous behaviour of Nitrogen.
- (viii) What are Chelates? Give examples.
- (ix) How Acetylene is prepared on commercial scale?
- (x) Discuss the mechanism of the chlorination of Benzene.
- (xi) Explain the dehydrogenation of alcohols.
- (xii) Why phenol shows acidic behavior?
- (xiii) What are the uses of Formaldehydes?

**SECTION "C"**

Marks: 27

**Note: Attempt any THREE questions. Each question carries equal marks.**

- Q3.(a) How acetic acid is prepared?  
 (b) Write a detail note on Enzymes.
- Q4.(a) Explain the preparation of bleaching powder by Hasenclever method.  
 (b) Write the chemical properties of bleaching powder.
- A5.(a) Explain the manufacturing of steel by Bessemer process.  
 (b) What is corrosion? Elaborate.
- Q6.(a) Write down the structural formulae of the following:  
 i. Acetaldehyde    ii. Ethyl acetate    iii. Toluene  
 iv. Methyl cyclohexane    v. cyclohexadiene
- (b) Give IUPAC names of the following:



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