

## MDCAT Chemistry Chapter 14 Chemistry of Hydrocarbons Online Test

Sr	Questions	Answers Choice
1	Among the following, which one is nucleophile	A. $H^+$ B. $Ca^{2+}$ C. $OH^-$ D. $Na^+$
2	Correct order for the reactivity of alkyl halide in $S_N2$ reactions	A. $R-I > R-F > R-Cl$ B. $R-F > R-Cl > R-I$ C. $R-I > R-Cl > R-F$ D. $R-Cl > R-I > R-F$
3	In nucleophilic substitution bimolecular reaction the order of reaction with respect to substrate	A. 2 order B. 3 order C. 1st order D. Zero order
4	The average bond energy of C-Br is	A. 228 kJmol <sup>-1</sup> B. 250 kJmol <sup>-1</sup> C. 200 kJmol <sup>-1</sup> D. 290 kJmol <sup>-1</sup>
5	In the transition state of $S_N2$ mechanism reaction with alkyl halides, which of the following orbital hybridization is involved	A. $sp^3$ B. $sp$ C. $sp^2$ D. $dsp^3$
6	Chloroform ( $CHCl_3$ ) is?	A. Primary alkyl halide B. Secondary alkyl halide C. Tertiary alkyl halide D. a liquid
7	Which of the following decides the reactivity of alkyl halides?	A. C-C bond strength B. C-H bond strength C. C-X bond strength D. Electronegativity difference
8	To prepare ethane by Wurtz synthesis the suitable alkyl halide is	A. Ethyl iodide B. any alkyl iodide C. Ethyl chloride D. Methyl bromide
9	A mixture of 1-chloropropane and 2-chloropropane when treated with alcoholic KOH, gives	A. Prop-2-ene B. Isopropylene C. Propene D. A mixture of prop-1-ene
10	For which mechanisms, the first step involved is the same	A. $E1$ and $E2$ B. $E2$ and $SN2$ C. $E2$ and $E1$ D. $E1$ and $SN1$
11	Dehydrohalogenation of secondary butyl bromide will give	A. Propene B. 1-Butene C. Butene D. 2-Butene
12	Which isomer of $C_4H_9Br$ will produce 2-methyl propan-2-ol on treatment with aqueous KOH	A. n-butyl bromide B. Sec-butyl bromide C. Isobutyl halide D. Tertiary butyl chloride
13	Out of monochloro, monobromo and moniodo derivatives of ethane, the most reactive compound towards nucleophilic substitution will be	A. $C_2H_5Br$ B. $C_2H_5Cl$ C. $C_2H_5I$ D. All are equally reactive
14	Which is an intermediate in $S_N1$	A. Ethoxide ion B. Alkene C. Alkyl halide D. Carbocation
15	$SN2$ -reactions can be usually observed in	A. Primary alkyl halide B. secondary alkyl halide C. Tertiary alkyl halide D. Both A. and B

16	An amine is produced in the following reaction $\text{C}_2\text{H}_5\text{I} + 2\text{NH}_3 \longrightarrow \text{C}_2\text{H}_5\text{NH}_2 + \text{NH}_4\text{I}$ . What is mechanism?	A. Electrophilic addition B. Electrophilic substitution C. Nucleophilic addition D. Nucleophilic substitution
17	An alkyl halide reacts with $\text{NH}_3$ to give	A. Amide B. Cyanide C. Amine D. Aniline
18	When purely alcoholic solution of sodium/potassium hydroxide and halogenoalkanes are reacted an alkene is formed, what is the mechanism of reaction?	A. Elimination B. Debromination C. Dehydration D. Reduction
19	Which of the following alkyl halides undergoes $\text{S}_\text{N}1$ reaction fastest	A. Methyl chloride B. Isobutyl chloride C. Ethyl chloride D. Tertiary butyl chloride
20	Which of the following reactants will be required to form ethene from ethyl chloride	A. $\text{Alcoholic KOH}$ B. Alkaline $\text{KMnO}_4$ C. Aqueous $\text{KOH}$ D. Aqueous $\text{NaOH}$