

MDCAT Chemistry Chapter 14 Chemistry of Hydrocarbons Online Test

Sr	Questions	Answers Choice
1	Which of the following reactions does not involve formation of carbocation?	A. SN1 and E1 B. EI and E2 C. SN1 and SN2 D. E2 and SN2
2	In elimination reaction i.e, in the formation of alkene, the reactivity of alkyl halide is in the order:	A. $\text{Cl} > \text{Br} > \text{I}$ B. $\text{I} > \text{Br} > \text{Cl}$ C. $\text{Br} > \text{Cl} > \text{I}$ D. $\text{I} > \text{Cl} > \text{Br}$
3	The species which are produced by heterolytic bond breaking and can act as electron pair donor	A. Free radicals B. Cations C. Nucleophiles D. electrophile
4	Reaction of ethyl bromide with ammonia	A. <div>Completes in a single step</div> B. Completes in two steps C. Continues till N is left with no lone pair D. is reversible
5	Among the following, which one is nucleophile	A. H^+ B. Ca^{2+} C. OH^- D. Na^+
6	Which one among the following is not a good leaving group	A. HSO_4^- B. Cl^- C. OH^- D. Br^-
7	Which one of the following is NOT a nucleophile	A. NH_2^+ B. BF_3 C. H_2O D. CH_3^-
8	Alkyl halides are considered to be very reactive compounds towards nucleophiles, because	A. They have an electrophilic carbon B. They have an electrophilic carbon and a bad leaving group C. They have an electrophilic carbon and a good leaving group D. They have a nucleophilic carbon and a good leaving group
9	An amine is produced in the following reaction $\text{C}_2\text{H}_5\text{I} + 2\text{NH}_3 \rightarrow \text{C}_2\text{H}_5\text{NH}_2 + \text{NH}_4\text{I}$. What is mechanism?	A. Electrophilic addition B. Electrophilic substitution C. Nucleophilic addition D. Nucleophilic substitution
10	Out of monochloro, monobromo and moniodo derivatives of ethane, the most reactive compound towards nucleophilic substitution will be	A. $\text{C}_2\text{H}_5\text{Br}$ B. $\text{C}_2\text{H}_5\text{Cl}$ C. $\text{C}_2\text{H}_5\text{I}$ D. All are equally reactive
11	In beta elimination reaction	A. carbon number changes B. unsaturated compound is formed C. hybridization of C remains same D. pi bonds are decreased
12	In the transition state of S_2 mechanism reaction with alkyl halides, which of the following orbital hybridization is involved	A. sp^3 B. sp C. sp^2 D. dsp ³
13	To prepare ethane by Wurtz synthesis the suitable alkyl halide is	A. Ethyl iodide B. any alkyl iodide C. Ethyl chloride D. Methyl bromide
14	Which isomer of $\text{C}_4\text{H}_9\text{Br}$ will produce 2-methyl propane-2-ol on treatment with aqueous KOH	A. n-butyl bromide B. Sec-butyl bromide C. Isobutyl halide D. Tertiary butyl chloride

15	Correct order for the reactivity of alkyl halide in S _N 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
16	For which mechanisms, the first step involved is the same	A. E1 and E2 B. E2 and S _N 2 C. E2 and E1 D. E1 and S _N 1
17	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
18	The alkaline hydrolysis of bromoethane shown below gives alcohol as the product: $\text{H}_3\text{C}-\text{CH}_2-\text{Br} \longrightarrow \text{H}_3\text{C}-\text{CH}_2-\text{OH}$ The reagent and the condition used in this reaction may be:	A. H ₂ O at room temperature B. KOH in alcohol C. Ethanol, heat D. Dilute NaOH(aq) warm
19	Which is a good nucleophile as well as a good leaving group?	A. F ⁻ B. Cl ⁻ C. Br ⁻ D. I ⁻
20	Which of the following is primary alkyl halide	A. Isopropyl halide B. Sec-butyl halide C. Tert-butyl halide D. Neo-pentyl halide