

MDCAT Chemistry Chapter 14 Chemistry of Hydrocarbons Online Test

| Sr | Questions | Answers Choice |
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| 1 | Which is an intermediate in SN1 reaction | A. Ethoxide ion B. Carbocation C. alkyl halide D. alkene |
| 2 | Out of monochloro, monobromo and moniodo derivatives of ethane, the most reactive compound towards nucleophilic substitution will be | A. C ₂ H ₅ Br B. C ₂ H ₅ Cl C. C ₂ H ₅ I D. All are equally reactive |
| 3 | Which of the following is primary alkyl halide | A. Isopropyl halide B. Sec-butyl halide C. Tert-butyl halide D. Neo-pentyl halide |
| 4 | When 2-bromobutane reacts with alcoholic KOH, the reaction is called | A. Chlorination B. Halogenation C. Dehydrohalogenation D. Hydrogenation |
| 5 | Chloroform (CHCl ₃) is? | A. Primary alkyl halide B. Secondary alkyl halide C. Tertiary alkyl halide D. a liquid |
| 6 | 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 |
| 7 | SN2-reactions can be usually observed in | A. Primary alkyl halide B. secondary alkyl halide C. Tertiary alkyl halide D. Both A. and B |
| 8 | The carbon atom of an alkyl group attached with halogen atom is called | A. Electrophile B. Free radical C. Nucleophile D. Nucleophilic centre |
| 9 | The reaction C ₂ H ₅ Cl + aqueous KOH → C ₂ H ₅ OH + KCl is | A. Electrophilic addition B. Nucleophilic addition C. Electrophilic substitution D. Nucleophilic substitution |
| 10 | 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 |
| 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 | Which of the following reactions does not involve formation of carbocation? | A. SN1 and E1 B. E1 and E2 C. SN1 and SN2 D. E2 and SN2 |
| 13 | The order of reactivity of alkyl halides towards nucleophile is | A. RI > RBr > RF > RCl B. RF > RCl > RBr > RI C. RI > RBr > RCl > RE D. RF > RBr > RCl > RI |
| 14 | Which one of the following is NOT a nucleophile | A. NH ₂ ⁺ B. BF ₃ C. H ₂ O D. CH ₃ ⁻ |
| 15 | Which of the following reactants will be required to form ethene from ethyl chloride | A. Alcoholic KOH B. Alkaline KMnO ₄ C. Aqueous KOH D. Aqueous NaOH |

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| 16 | Which of the following factors does not affect the SN1 rate is | A. Nucleophilicity of the attacking nucleophile B. Stability of the carbonium ion C. Solvent system D. The nature of leaving group |
| 17 | When purely alcoholic solution of sodium/potassiumhydroxide and halogenoalkanes are reacted an alkene is formed, what is the mechanism of reaction? | A. Elimination B. Debromination C. Dehydration D. Reduction |
| 18 | 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 |
| 19 | The average bond energy of C-Br is | A. 228 kJmol ⁻¹ B. 250 kJmol ⁻¹ C. 200 kJmol ⁻¹ D. 290 kJmol ⁻¹ |
| 20 | 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 |