MDCAT Chemistry Chapter 14 Chemistry of Hydrocarbons Online Test

Sr	Questions	Answers Choice
1	The carbon atom of an alkyl group attached with halogen atom is called	A. Electrophile B. Free redical C. Nucleophile D. Nucleophilic centre
2	The average bond energy of C-Br is	A. 228 kJmol-1 B. 250 kJmol-1 C. 200 kJmol-1 D. 290 kJmol-1
3	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
4	The rate of E1 reaction depends upon	A. The concentration of substrate B. The concentration of substrate as well as nucleophile C. The concentration Nucleophilic D. Nature of Catalyst
5	Alkyl halides are considered to be very reactive compounds towards nucleophiles, because	A. The have an electrophilic carbon B. They have an electrophilic carbon and a bad leaving group C. They have an electrophilic carbon and a good laving group D. They have a nucleophilic carbon and a good leaving group
6	SN2-reactions can be usually observed in	A. Primary alkylı halide B. secondary alkyl halide C. Tertiary alkyl halide D. Both A. and B
7	The Sl mechanism for the hydrolysis of an alkyl halide to an alcohol involves the formation of	A. Carbocation B. Carbanion C. Pentavalent carbon in the transition state D. Free radical
8	An amine is produced in the following reaction C2H5I+2NH3-------C2H5NH2 +NH4I. What is mechanism?	A. Electrophilic addition B. Electrophilic substitution C. Nucleophilic addition D. Nucleophilic substitution
9	Which is a good nucleophile as well as a good leaving group?	A. F- B. Cl- C. Br- D. I-
10	Chloroform (CHCl3) is?	A. Primary alkyl halide B. Secondary alkyl halide C. Tertiary alkyl halide D. a liquid
11	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
12	In the transition state of S2 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	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
14	Which one of the following is not associated with SN2 mechanism	A. 100 % inversion of configuration B. Tertiar alkyl halides C. 2nd order kinetics

		D. Change of hy bridization from sp^3 to sp^2 in transition state
15	Which isomer of C4H9Br 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
16	Which of the following is primary alkyl halide	A. Isopropyl halide B. Sec-butyl halide C. Tert-buryi halide D. Neo-pentyl halide
17	Elimination unimolecular reactions involve	A. Second order kinetics B. First order kinetics C. Third order kinetics D. Zero order kinetics
18	Out of monochloro, monobromo and mongiodo derivatives of ethane, the mos reactive compound towards nucleophilic substitution will be	A. C2H5Br B. C2H5Cl C. C2H5I D. All are equally reactive
19	An alkyl halide reacts with NH3 to give	A. Amide B. Cyanide C. Amine D. Aniline
20	The reaction C2H5Cl + aqueous KOH---------C2H5OH+ KCl is	A. Electrophilic addition B. Nucleophilic addition C. Electrophilic substitution D. Nucleophilic substitution
21	Correct statement about Nucleophilic substitution bimolecular is	A. Transition state is formed B. Inversion take place C. It is two step reacticn D. Both a &c
22	Correct order for the reactivity ofalkyl halide in S, 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
23	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
24	The alkaline hydrolysis of bromoethane shown below gives alcohol as the product: H3C-CH2-Br-------H3C-CH2-OH The reagent and the condition used in this reaction may be:	A. H20 at room temperature B. KOH in alcohol C. Ethanol. heat D. Dilute NaOH(aq) warm
25	The order of reactivitv of alksl halides towards nucleophile is	A. RI>RBr RF>RCI B. RF>RCI>RBr>RI C. RI>RBr> RCI>RE D. RF>RBr>RCI>RI
26	Which one of the following is NOT a nucleophile	A. NH2+ B. BF3 C. H2O D. CH3-
27	Which is an intermediate in Svl	A. Ethoxide ion B. Alkene C. Alkyl halide D. Carbocation
28	Among the following, which one is nucleophile	A. H+ B. Ca2+ C. OH- D. Na+
29	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
30	In elimination reaction i.e, in the formation of alkene, the reactivity of alkyl halide is in the order:	A. Cl>Br>I B. I>Br>Cl C. Br>Cl>I D. I>Cl> Br
31	A mixture of 1-chloropropane and 2-chloro-propane when treated with alcoholic KOH, gives	A. Prop-2-ene B. Isopropy lene C. Propene D. A mixture of prop-l-ene
		A. Methyl chloride

32	Which of the following alkyl halides undergoes SN1 reaction fastest	A. Methyl chloride B. Isobutyl chlorido C. Ethy l chloride D. Tertiary butyl chloride
33	When 2-bromobutane reacts with alcoholic KOH, the reaction is called	A. Chlorination B. Halogenation C. Dehydrohalogenation D. Hydrogenation
34	Which compound is obtained hy the elimination reaction on bromoethane?	A. Butene B. Ethene C. Propene D. Propane
35	In nucleophilie substitution bimolecular reaction the order of reaction with respect to substrate	A. 2 order B. 3 order C. 1st order D. Zero order
36	Which one among the following is not a good leaving group	A. HSO4- B. Cl- C. OH- D. Br-
37	Which of the following reactants will be required to form ethene from ethyl chloride	A. _{Alcoholic KOH} B. Alkaline KMnO4 C. Aqucous KOH D. Aqucous NaOH
38	Dehydrohalogenation of secondary butyl bromide will give	A. Propene B. 1-Butene C. Butene D. 2-Butene
39	In an elimination reaction a more substituted alkene is formed due to the stability associated with	A. Free radical B. transition state C. Activated complex D. Carbocation
40	Which pair gives same dehydrohalogenation product	A. l-Chlorobutane, 2-Chlorobutane B. l-Chloropropane, 2-Chloropropane C. l-Bromopentane. 3-Bromopentane D. iso-butvl chloride. 2°- butyl chloride
41	The reagent for alkaline hydrolysis of ethyl bromide to form ethyl alcohol is	A. water at room T B. Alcoholic KOH+heat C. Ethanol + heat D. dil. NaOH+ heat
42	Which is an intermediate in SN1 reaction	A. Ethoxide ion B. Carbocation C. alkyl halide D. alkene
43	In beta elimination reaction	A. carbon number changes B. unsaturated compound is formed C. hybridization. ofC remains same D. pi bonds are decreased
44	Reaction of ethyl bromide with ammonia	A. Completes in a single step B. Completes in two steps C. Continues till N is left with no lone pair D. is reversible
45	To prepare ethane by Wurtz synthesis the suitable alkyl halide is	A. Ethyl iodide B. any alkyl iodide C. Ethyl chloride D. Methyl bromide
46	Which of the following reactions does not involve formation of carbocation?	A. SN1 and E1 B. El and E2 C. SN1 and SN2 D. E2 and SN2