MDCAT Chemistry Online Test

Sr	Questions	Answers Choice
1	To prepare ethane by Wurtz synthesis the suitable alkyl halide is	A. Ethyl iodide B. any alkyl iodide C. Ethyl chloride D. Methyl bromide
2	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
3	In beta elimination reaction	A. carbon number changes B. unsaturated compound is formed C. hybridization. ofC remains same D. pi bonds are decreased
4	Which is an intermediate in SN1 reaction	A. Ethoxide ion B. Carbocation C. alkyl halide D. alkene
5	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
6	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
7	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
8	Dehydrohalogenation of secondary butyl bromide will give	A. Propene B. 1-Butene C. Butene D. 2-Butene
9	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
10	Which one among the following is not a good leaving group	A. HSO4- B. Cl- C. OH- D. Br-
11	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
12	Which compound is obtained hy the elimination reaction on bromoethane?	A. Butene B. Ethene C. Propene D. Propane
13	When 2-bromobutane reacts with alcoholic KOH, the reaction is called	A. Chlorination B. Halogenation C. Dehydrohalogenation D. Hydrogenation
14	Which of the following alkyl halides undergoes SN1 reaction fastest	A. Methyl chloride B. Isobutyl chlorido C. Ethy l chloride D. Tertiary butyl chloride

15	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
16	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
17	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
18	Among the following, which one is nucleophile	A. H+ B. Ca2+ C. OH- D. Na+
19	Which is an intermediate in SvI	A. Ethoxide ion B. Alkene C. Alkyl halide D. Carbocation
20	Which one of the following is NOT a nucleophile	A. NH2+ B. BF3 C. H2O D. CH3-
21	The order of reactivitv of alksI halides towards nucleophile is	A. RI>RBr RF>RCI B. RF>RCI>RBr>RI C. RI>RBr> RCI>RE D. RF>RBr>RCI>RI
22	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
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	Correct order for the reactivity ofalkyl halide in S, reactions	A. R-I>R-F>R-CI B. R-F>R-CI>R-I C. R-I>R-CI>R-F D. R-CI>R-I>R-F
25	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
26	The reaction C2H5CI + aqueous KOH--------C2H5OH+ KCI is	A. Electrophilic addition B. Nucleophilic addition C. Electrophilic substitution D. Nucleophilic substitution
27	An alkyl halide reacts with NH3 to give	A. Amide B. Cyanide C. Amine D. Aniline
28	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
29	Elimination unimolecular reactions involve	A. Second order kinetics B. First order kinetics C. Third order kinetics D. Zero order kinetics
30	Which of the following is primary alkyl halide	A. Isopropyl halide B. Sec-butyl halide C. Tert-buryi halide D. Neo-pentyl halide
31	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
32	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

		D. Change of hybridization from sp to sp^2 in transition state
33	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
34	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
35	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
36	Chloroform (CHCl3) is?	A. Primary alkyl halide B. Secondary alkyl halide C. Tertiary alkyl halide D. a liquid
37	Which is a good nucleophile as well as a good leaving group?	A. F- B. Cl- C. Br- D. I-
38	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
39	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
40	SN2-reactions can be usually observed in	A. Primary alkylı halide B. secondary alkyl halide C. Tertiary alkyl halide D. Both A. and B
41	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
42	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
43	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
44	The average bond energy of C-Br is	A. 228 kJmol-1 B. 250 kJmol-1 C. 200 kJmol-1 D. 290 kJmol-1
45	The carbon atom of an alkyl group attached with halogen atom is called	A. Electrophile B. Free redical C. Nucleophile D. Nucleophilic centre
46	Hydration of ethene is an example of	A. Electrophilic addition B. Electrophilic substitution C. Nucleophilic addition D. Nucleophilic substitution
47	Ethyl and methyl groups are equidistant in a chain, the preference is given to?	A. Ethyl B. methyl C. both ethyl and methyl D. methyl mostly
48	Tertiary alcohols are the easiest to dehydrate because	A. They form stable carbocation B. They have less hydrogen C. They have bigger size D. They are polar

49	The reaction of alkyl halide in the presence of alcoholic KOH is	A. Substitution B. Addition C. Acid-base D. Elimination
50	Which group activates the benzene ring	A. -COOH B. -COR C. -CHO D. -OH
51	Benzene reacts with Ethyl chloride in presence of AlCls to give	A. Benzalchloride B. Benzyl chloride C. Ethyl benzene D. Benzotrichloride
52	Ethene can give all of the following reactions except	A. Addition B. Free radical substitution C. Hydrohalogenation D. Hydration
53	Active sulphonating agent during sulphonation of benzene is	A. SO2 B. SO3 C. SO3H D. SO3+
54	Glyoxal molecule has?	A. two carbonyl groups B. One aldehydic and one carbonyl group C. Two aldehydic groups D. Two carboxyl group
55	Ethane when completely halogenated in excess of chiorine can form	A. Hexachloroethane B. Dichloroethane C. Pentachloroethane D. 1.1.2.2-terachloroethane
56	The origin ofacidic nature of alkyne is?	A. small size of C B. Small size of H C. polarity of triple bond D. sp hybridization
57	A compound that has a nucleophilic carbon?	A. C2H2 B. C2H4 C. C3H8 D. C6H6
58	The addition of HCl to ethene gives?	A. Chloroethane B. 1,2-dichloroethane C. 1.1-dichloroethane D. 2-chloroethane
59	The reaction that generates an ionic bond is	A. Halogenation of ethene B. polymerization of ethene C. Hydrogenation of ethyne D. Reaction of ethyne withs sodamide
60	Acetylide can give back ethyne upon treatment with	A. water B. strong base C. dil. Acid D. weak base