

## ECAT Chemistry Chapter 21 Alkyl Halides Online Test




| Sr | Questions  | Answers Choice   |
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| 1  | Hydrolysis of Grignard's reagent gives:  | A. Alcohol<br>B. Halide<br>C. Alkyl<br>D. Alkane   |
| 2  | Alkyl halides react with lithium dialkyl copper reagents to give   | A. Alkenes<br>B. Alkyl copper halides<br>C. Alkanes<br>D. Alkenyl halides  |
| 3  | Alkyl magnesium halides are known as   | A. Simon-smith reagent<br>B. Tollen's reagent<br>C. Grignard's reagent<br>D. Barford's reagent   |
| 4  | Which of the following reacts with chloroform and base to form phenyl isocyanide?                                      | A. Nitrobenzene<br>B. Phenol<br>C. Chlorobenzene<br>D. Aniline   |
| 5  | What is the total number of different chloroethanes, formula $C_2H_{6-n}Cl_n$ , where n can be any integer from 1 to 4 | A. 4<br>B. 6<br>C. 7<br>D. 8   |
| 6  | The general formula of alkyl halides is  | A. $C_nH_{2n}X$<br>B. $C_nH_{2n-1}X$<br>C. $C_nH_{2n+1}X$<br>D. $C_nH_{2n-2}X$   |
| 7  | In a primary alkyl halide, the halogen atom is attached to a carbon which is further attached to                       | A. Only one carbon atom<br>B. Two carbon atoms<br>C. Three carbon atoms<br>D. one or no carbon atom  |
| 8  | Grignard's reagent on treatment with chloramine give   | A. Acetamide<br>B. Primary amine<br>C. Secondary amine<br>D. Urea  |
| 9  | Benzene reacts with chlorine to form benzene hexachloride in presence of   | A. Nickel<br>B. $AlCl_3$<br>C. Bright sunlight<br>D. Zinc  |
| 10 | Grignard reagent is not prepared in aqueous medium but prepared in ether medium because                                | A. The reagent is highly reactive in ether<br>B. The reagent does not react with water<br>C. The reagent becomes inactive in water<br>D. The reagent reacts with water |
| 11 | Which of the following compounds could be prepared by reacting bromoethane with KCN and then reducing the product      | A. $CH_3CH_2CH_2CH_3$<br>B. $CH_3CH_2CH_2CH_2NH_2$<br>C. $CH_3CH_2CH_2CH_2CH_2NH_2$<br>D. $CH_3CH_2CH_2CH_2CH_2CH_2NH_2$   |
| 12 | For the carbylamine reaction we need hot alc.KOH and   | A. Any amine and chloroform<br>B. Chloroform and Ag powder<br>C. A primary amine and chloroform<br>D. A mono alkyl amine and trichlorom-ethane                         |
| 13 | Gammexane is   | A. Chlorobenzene<br>B. Benzyl chloride<br>C. Bromobenzene<br>D. Benzene hexachloride   |
| 14 | Question Image   | A. Electrophilic substitution<br>B. Electrophilic addition<br>C. Free radical substitution<br>D. Nucleophilic substitution   |
| 15 | which one of the following is not a nucleophile?   | A. $H_2O$<br>B. $S^{2-}$<br>C. $BF_3$<br>D. $OH^-$   |

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|    |   | D. $\text{NH}_3$   |
| 16 | Which is a good nucleophile?  | A. $\text{F}^-$<br>B. $\text{Cl}^-$<br>C. $\text{Be}$<br>D. $\text{I}^-$   |
| 17 | Question Image  | A. $\text{NH}_3$ HCl<br>B. KCN in $\text{C}_2\text{H}_5\text{OH}$ NaOH<br>C. KCN in $\text{C}_2\text{H}_5\text{OH}$ HCl<br>D. HCN NaOH       |
| 18 | The reaction of an alkyl halide with $\text{RCOOAg}$ produces   | A. Ester<br>B. Ether<br>C. Aldehyde<br>D. Ketone   |
| 19 | $\text{S}_{\text{N}}1$ reaction of alkylhalides leads to  | A. Retention of configuration<br>B. Racemisation<br>C. Inversion of configuration<br>D. None of these  |
| 20 | Dehydrohalogenation of alkyl halides produces   | A. Alcohol<br>B. Alkane<br>C. Alkene<br>D. Alkyne  |
| 21 | Grignard's reagent on treatment with dry $\text{CO}_2$ and HCl yields   | A. Ester<br>B. Alcohol<br>C. Carboxylic acid<br>D. Aldehyde  |
| 22 | The elimination of hydrogen halide from adjacent carbon atoms is called   | A. Dehydrogenation<br>B. Hydrogenation<br>C. Dehydrohalogenation<br>D. Hydrohalogenation   |
| 23 | Most reactive halide towards $\text{S}_{\text{N}}1$ reaction is   | A. n-Butyl chloride<br>B. sec-Butyl chloride<br>C. tert-Butyl chloride<br>D. Allyl chloride  |
| 24 | When $\text{CO}_2$ is made to react with ethyl magnesium iodide, followed by acid hydrolysis, the product formed is | A. Propane<br>B. Propanoic acid<br>C. Propanal<br>D. Propanol  |
| 25 | Alkanes may be prepared by the reaction of alkyl halides with   | A. Alcohol<br>B. Carboxylic acid<br>C. Grignard reagents<br>D. None of these   |
| 26 | Grignard reagent is reactive due to :   | A. The presence of halogen atom<br>B. The presence of Mg atom<br>C. The polarity of C - Mg bond<br>D. None of them                           |
| 27 | Which of the following with aqueous KOH will give acetaldehyde?   | A. 1, 2-Dichloroethane<br>B. 1,1-Dichloroethane<br>C. Chloroacetic acid<br>D. Ethyl chloride   |
| 28 | Grignard's reagent is   | A. Alkyl halide<br>B. Magnesium halide<br>C. Alkyl magnesium halide<br>D. Ethereal solution of an alkyl halide                               |
| 29 | By reaction Grignard's reagent with the HCHO we get   | A. $1^\circ$ - alcohol<br>B. $2^\circ$ - alcohol<br>C. $3^\circ$ - alcohol<br>D. All of these  |
| 30 | When an alcohol reacts with $\text{SOCl}_2$ an alkyl halide is formed. What are two other products                  | A. $\text{SO}_2$ and HCl<br>B. $\text{SiO}_2$ and $\text{H}_2\text{O}$<br>C. HCl and $\text{H}_2\text{O}$<br>D. $\text{H}_2\text{S}$ and HCl |
| 31 | Action of Zn with alkyl halides in the presence of an inert solvent forms higher alkanes. This reaction is known as | A. Wurtz reaction<br>B. Frankland's reaction<br>C. Cannizzaro reaction<br>D. Kolbe's reaction  |
| 32 | The reaction of alcohol with $\text{SOCl}_2$ in the presence of pyridine as catalyst gives                          | A. Acids<br>B. Acid chloride<br>C. Alkyl halide<br>D. Benzene  |
| 33 |   | A. Ethane<br>B. Ethene   |

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| 33 | Ethyl chloride on treatment with aqueous alkali gives  | <p>A. Ethene</p> <p>C. Ethanal</p> <p>D. Ethanol</p>  |
| 34 | Carbon atom holding halogen in aryl halides is   | <p>A. <math>sp^{2\text{-hybridised}}</math></p> <p>B. <math>sp^3\text{-hybridised}</math></p> <p>C. <math>sp\text{-hybridised}</math></p> <p>D. <math>sp^3\text{-d-hybridised}</math></p>   |
| 35 | $E_1$ mechanism is generally shown by  | <p>A. <math>1^\circ - RX</math></p> <p>B. <math>2^\circ - RX</math></p> <p>C. <math>3^\circ - RX</math></p> <p>D. None of these</p>   |
| 36 | When alkyl halides are heated with aqueous solution of ammonia at about $100^\circ C$ , amines are formed. This reaction is known as | <p>A. Williamsons synthesis</p> <p>B. Hoffmanns reaction</p> <p>C. Wurtz reaction</p> <p>D. Clemmensen reaction</p>   |
| 37 | Which is a weak nucleophile  | <p>A. <math>OH^-</math></p> <p>B. <math>Br^-</math></p> <p>C. <math>NH_3</math></p> <p>D. <math>Cl^-</math></p>   |
| 38 | Iodoethane reacts with sodium in ether, the product formed is  | <p>A. Pentene</p> <p>B. Propyne</p> <p>C. Butene</p> <p>D. Butane</p>   |
| 39 | Which of the following undergoes nucleophilic substitution exclusively by $S_N1$ mechanism?  | <p>A. Benzyl chloride</p> <p>B. Ethyl chloride</p> <p>C. Chlorobenzene</p> <p>D. Isopropyl chloride</p>   |
| 40 | The rate of $E_1$ reaction depends upon:   | <p>A. The concentration of substrate</p> <p>B. The concentration of nucleophile</p> <p>C. The concentration of substrate as well as nucleophile</p> <p>D. None of these</p>   |
| 41 | Alkyl halides on treatment with aqueous KOH give   | <p>A. Phenol</p> <p>B. Alcohol</p> <p>C. Aldehyde</p> <p>D. Ketone</p>  |
| 42 | Best method of preparation of alkyl halide from alcohols is by its reaction with:  | <p>A. HX</p> <p>B. <math>SOCl_2</math></p> <p>C. <math>PX_5</math> and <math>PX_3</math></p> <p>D. All</p>  |
| 43 | Grignard reagent is prepared by the reaction of magnesium metal with alkyl halide in the presence of                                 | <p>A. Alcohol</p> <p>B. Water</p> <p>C. Sulphuric acid</p> <p>D. Dry ether</p>  |
| 44 | Ethyl bromide on treatment with alcoholic KOH gives  | <p>A. Ethylene</p> <p>B. Ethanol</p> <p>C. Acetic Acid</p> <p>D. Ethane</p>   |
| 45 | The reactivity order of alkyl halides for a particular alkyl group is  | <p>A. Fluoride &gt; chloride &gt; bromide &gt; iodide</p> <p>B. Chloride &gt; bromide &gt; fluoride &gt; iodide</p> <p>C. Iodide &gt; bromide &gt; chloride &gt; fluoride</p> <p>D. Bromide &gt; iodide &gt; chloride &gt; fluoride</p>                 |
| 46 | Question Image   | <p>A. Condensation</p> <p>B. Electrophilic substitution</p> <p>C. Free radical substitution</p> <p>D. Nucleophilic substitution</p>   |
| 47 | If Grignard reagent is allowed to react with another alkyl halide the main product is  | <p>A. An alkane</p> <p>B. Cyclo alkane</p> <p>C. Alkyne</p> <p>D. An alkene</p>   |
| 48 | With the increase in size of halogen atom the reactivity of an alkyl halide  | <p>A. Increases</p> <p>B. Decreases</p> <p>C. Remain constant</p> <p>D. None of these</p>   |
| 49 | Alkyl halides are considered to be very reactive compounds towards nucleophiles because  | <p>A. They have an electrophilic carbon</p> <p>B. They have an electrophilic carbon and a good leaving group</p> <p>C. They have an electrophilic carbon and a bad leaving group</p> <p>D. They have a nucleophilic carbon and a good leaving group</p> |
| 50 | Which of the following compounds on oxidation gives benzoic acid?  | <p>A. Chlorophenol</p> <p>B. Chlorotoluene</p> <p>C. Chlorobenzene</p> <p>D. Benzyl chloride</p>  |

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| 51 | If carbon dioxide is bubbled through solution of Grignard's reagent in ether and the resultant product is reacted with hydrochloric acid, it gives  | A. An alkane<br>B. Al alcohol<br>C. A carboxylic acid<br>D. An aldehyde   |
| 52 | Which of the followings is not a nucleophile  | A. $\text{OH}^-$<br>B. $\text{NH}_3$<br>C. $\text{C}_2\text{H}_5\text{O}^-$<br>D. $\text{Br}_2$   |
| 53 | Tetrabromoethane on treatment with alcoholic zinc gives   | A. Ethylbromide<br>B. Ethane<br>C. Ethene<br>D. Ethyne  |
| 54 | Which responds to +ve iodoform test?  | A. Butanol-1<br>B. Butan-1-al<br>C. Butanol-2<br>D. 2-pentanone   |
| 55 | Which of the following compounds will form a hydrocarbon on reaction with Grignard reagent  | A. A ketone<br>B. An aldehyde<br>C. An ether<br>D. Water  |
| 56 | The order of reactivity of an alkyl halide (R-X) for a particular alkyl group is  | A. Iodide > bromide > chloride<br>B. Chloride > bromide > iodide<br>C. Bromide > chloride > iodide<br>D. Bromide > iodide > chloride  |
| 57 | $\text{S}_\text{N}2$ reactions can be best carried out with:  | A. Pri. alkyl halide<br>B. Sec. Alkyl halide<br>C. Ter. Alkyl halide<br>D. All of three   |
| 58 | Reaction of which with Grignard's reagent gives primary alcohol:  | A. Formaldehyde<br>B. Aldehyde<br>C. Ketones<br>D. Acetone  |
| 59 | Reaction of ethylamine with chloroform in alcoholic KOH produces  | A. $\text{CH}_3\text{OH}$<br>B. $\text{CH}_3\text{NC}$<br>C. $\text{C}_2\text{H}_5\text{NC}$<br>D. $\text{C}_2\text{H}_5\text{CN}$  |
| 60 | Primary carbon attaches with other hydrogen atoms directly:   | A. One<br>B. Two<br>C. Three<br>D. At least one or more than it   |
| 61 | In primary alkyl halides, the halogen atom is attached to a carbon which attached to how many carbon atoms?   | A. Two<br>B. Three<br>C. One<br>D. Four   |
| 62 | Which one of the following will have the maximum dipole moment  | A. $\text{CH}_3\text{F}$<br>B. $\text{CH}_3\text{Cl}$<br>C. $\text{CH}_3\text{Br}$<br>D. $\text{CH}_3\text{I}$  |
| 63 | Metal used in the preparation of Grignard's reagent is:   | A. Ca<br>B. Na<br>C. Mg<br>D. Zn  |
| 64 | Alkyl halides are reactive :  | A. High<br>B. Medium<br>C. Less<br>D. Least   |
| 65 | Dehydrohalogenation of alkyl halides give   | A. Alkanes<br>B. Alkenes<br>C. Alkynes<br>D. Aldehyde   |
| 66 | Replacement of Cl of Chlorobenzene to give phenol requires drastic conditions but chlorine of 2, 4-Dinitrochlorobenzene is readily replaced because | A. $\text{NO}_2$ makes the electron rich ring at ortho and para positions<br>B. $\text{NO}_2$ withdraws electrons at metaposition<br>C. $\text{NO}_2$ donate electrons at m-position<br>D. $\text{NO}_2$ withdraws electrons at ortho and para position |
| 67 | Butanenitrile is formed by reaction of KCN with   | A. Propyl alcohol<br>B. Butyl chloride<br>C. Butyl alcohol<br>D. Propyl Chloride  |
| 68 | Cyanoform is _____ acid in nature than the chloroform. The missing word is  | A. Stronger<br>B. Weaker<br>C. Amphoteric<br>D. None of these   |


## D. Neutral

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| 69 | Which reaction is example of nucleophilic substitution   |  |
| 70 | Elimination bimolecular reactions usually obey   | A. First order kinetics<br>B. Second order kinetics<br>C. Third order kinetics<br>D. Zero order kinetics   |
| 71 | Steps in SN <sub>2</sub> reactions are:  | A. One<br>B. Two<br>C. Three<br>D. Four  |
| 72 | When alkyl halide is heated with aqueous solution of ammonia at 100°C the major product is                       | A. Primary amine<br>B. Secondary amine<br>C. Tertiary amine<br>D. Mixture of amines and salt   |
| 73 | 1-Chlorobutane on reaction with alcoholic potash gives   | A. But-1-ene<br>B. Butan-1-ol<br>C. But-2-ene<br>D. Butan-2-ol   |
| 74 | Which of the following chloro compounds is heat easily hydrolysed by hydroxide ion to give the product indicated |  |
| 75 | Both E <sub>1</sub> and E <sub>2</sub> mechanism can be shown by   | A. 1° - RX<br>B. 2° - RX<br>C. 3° - RX<br>D. None of these   |
| 76 | How many monochlorobutanes will be possible on chlorination of n-butane?   | A. 1<br>B. 2<br>C. 3<br>D. 5   |
| 77 | Chlorobenzene on heating with aqueous NH <sub>3</sub> under pressure in the presence of cuprous chloride gives   | A. Benzamide<br>B. Nitrobenzene<br>C. Aniline<br>D. Chloroaminobenzene   |
| 78 | When carbon dioxide is passed through the R - Mg - X is produced   | A. Any carboxylic acid<br>B. Propanoic acid<br>C. Propanedioic acid<br>D. None of these  |
| 79 |                               | A. Electrophilic addition<br>B. Electrophilic substitution<br>C. Free radical substitution<br>D. Nucleophilic addition   |
| 80 | 2-Bromopentane is heated with potassium ethoxide in ethanol. The major product obtained is                       | A. 2-Ethoxypentane<br>B. Pent-1-ene<br>C. cis-Pent-2-ene<br>D. trans-Pent-2-ene  |
| 81 | The rate of E <sub>1</sub> reaction depends upon   | A. The concentration of substrate<br>B. The concentration of nucleophile<br>C. The concentration of substrate as well as nucleophile<br>D. None of the above   |
| 82 |                               | A. 2-bromo-3-methylbutane<br>B. 3-methyl-2-bromobutane<br>C. 2-methyl-3-bromobutane<br>D. All of these   |
| 83 |                               | A. Primary alkyl halide<br>B. Secondary alkyl halide<br>C. Tertiary alkyl halide<br>D. None of these   |
| 84 | The order of reactivity for a given halogen in Grignard's reagent is:  | A. $\text{CH}_3 > \text{C}_2\text{H}_5 > \text{C}_3\text{H}_7 > \text{C}_4\text{H}_9$<br>B. $\text{C}_2\text{H}_5 > \text{C}_3\text{H}_7 > \text{C}_4\text{H}_9 > \text{CH}_3$<br>C. $\text{C}_3\text{H}_7 > \text{C}_4\text{H}_9 > \text{C}_2\text{H}_5 > \text{CH}_3$<br>D. $\text{C}_4\text{H}_9 > \text{C}_3\text{H}_7 > \text{C}_2\text{H}_5 > \text{CH}_3$ |
| 85 | The reactivity order of alkyl halides for a particular alkyl group is:   | A. $\text{F} > \text{Cl} > \text{Br} > \text{I}$<br>B. $\text{Cl} > \text{Br} > \text{F} > \text{I}$<br>C. $\text{I} > \text{Br} > \text{Cl} > \text{F}$<br>D. $\text{Br} > \text{I} > \text{Cl} > \text{F}$   |

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|     |  | D. $\text{Br}_2/\text{Ag}^+/\text{Ag}^+/\text{C}(\text{Ag}^+)$   |
| 86  | Elimination bimolecular reactions involve:   | A. First order Kinetics<br>B. Third order kinetics<br>C. Zero order kinetics   |
| 87  | $\text{SN}_2$ reaction has order of reaction :   | A. First<br>B. Second<br>C. Third<br>D. Zero   |
| 88  | Which of the following reagent cannot be used for preparing alkyl chloride from alcohol?                                   | A. $\text{HCl} + \text{anhyd. ZnCl}_2$<br>B. $\text{NaCl}$<br>C. $\text{PCl}_5$<br>D. $\text{SOCl}_2$  |
| 89  | Which one of the following is mainly responsible for depletion of ozone layer?   | A. Methane<br>B. Carbon dioxide<br>C. Water<br>D. chlorofluorocarbons  |
| 90  | Which represents nucleophilic aromatic substitution reaction?  | A. Reaction of benzene with $\text{Cl}_2$ in sunlight<br>B. Benzyl bromide hydrolysis with water<br>C. Reaction of $\text{NaOH}$ with dinitrofluorobenzene<br>D. Sulphonation of benzene   |
| 91  | When formaldehyde is added to Grignard reagent we get  | A. Aldehyde<br>B. Acetone<br>C. Primary alcohol<br>D. Secondary alcohol  |
| 92  | What happens when $\text{CCl}_4$ is treated with $\text{AgNO}_3$ solution?   | A. $\text{NO}_2$ will be evolved<br>B. A white ppt. of $\text{AgCl}$ will form<br>C. $\text{CCl}_4$ will dissolve in $\text{AgNO}_3$ solution<br>D. Nothing will happen  |
| 93  | Ammonia like water also reacts with Grignard's reagent to give   | A. Alkane<br>B. Alkene<br>C. Alkyne<br>D. Amide  |
| 94  | To get DDT, chlorobenzene has to react with one of the following compound in the presence of conc. $\text{H}_2\text{SO}_4$ | A. Trichloroethane<br>B. Dichloroacetone<br>C. Dichloroacetaldehyde<br>D. Trichloroacetaldehyde  |
| 95  | Benzene hexachloride is used as  | A. Dye<br>B. Antimicrobial drug<br>C. Antibiotic<br>D. Insecticide   |
| 96  | Which one of the following is not a nucleophile  | A. $\text{H}_2\text{O}$<br>B. $\text{H}_2\text{S}$<br>C. $\text{BF}_3$<br>D. $\text{NH}_3$   |
| 97  | Grignard reagent is reactive due to  | A. The presence of halogen atom<br>B. The presence of Mg atom<br>C. The polarity of C - Mg bond<br>D. None of above  |
| 98  | Which of the following alkyl halides is used as a methylating agent  | A. $\text{CH}_3\text{CH}_2\text{I}$<br>B. $\text{CH}_3\text{CH}_2\text{CH}_2\text{I}$<br>C. $\text{C}_2\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{I}$<br>D. $\text{C}_2\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{I}$ |
| 99  | The alkyl halide molecule on which a nucleophile attacks is called   | A. Substrate<br>B. Substituent<br>C. Substituted<br>D. All of these  |
| 100 | By simply reacting Grignard's reagent with water we get  | A. An alkane<br>B. Higher alkane<br>C. An alkene<br>D. An alkyne   |
| 101 | Alkyl halides can be prepared by treating halogen acids with   | A. Ethane<br>B. Ethanol<br>C. Ethene and ethanol<br>D. Aldehyde  |
| 102 | Allyl chloride on dehydrochlorination gives  | A. Propadiene<br>B. Propylene<br>C. Allyl alcohol<br>D. Acetone  |
| 103 | Tertiary alkyl halides are practically inert to substitution by $\text{SN}_2$ mechanism because of                         | A. Insolubility<br>B. Instability<br>C. Inductive effect   |

D. Steric hindrance

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| 104 | When CO <sub>2</sub> is made to react with ethyl magnesium iodine, followed by hydrolysis, the product formed is:                           | A. Propane<br>B. Propanoic acid<br>C. Propanal<br>D. Propanol  |
| 105 | When metallic sodium in ether is heated with ethyl chloride, which alkane is formed   | A. Propane<br>B. Ethane<br>C. Iso-butane<br>D. N-butane  |
| 106 | CFCs undergo homolytic fission by uv light in the stratosphere which radical could result from this irradiations of CHClCF <sub>2</sub> Cl. | A. CHF Cl C FCl<br>B. CH Cl CF <sub>2</sub> Cl<br>C. CHF CF <sub>2</sub> Cl<br>D. C FCl CF <sub>2</sub> Cl   |
| 107 | An electrophile may be  | A. Positive<br>B. Negative<br>C. Neutral<br>D. Both c and a  |
| 108 | General formula of alkyl halide is:   | A. R---X<br>B. R---OH<br>C. R-----COH<br>D. R-----COOH   |
| 109 | Ethyl bromide is formed by the reaction of HBr with   | A. Ethane<br>B. Ethene<br>C. Ethyne<br>D. Propane  |
| 110 | E <sub>2</sub> has molecularity :   | A. One<br>B. Two<br>C. Three<br>D. Half  |
| 111 | If ketone reacts with Grignard's reagent, it also produces alcohol, But it will be a  | A. primary alcohol<br>B. Secondary alcohol<br>C. Tertiary alcohol<br>D. Aromatic alcohol   |
| 112 | A carbon atom carrying a positive charge and attached to three other atoms of groups is called  | A. Caronium ion<br>B. Carbanion<br>C. Oconium ion<br>D. Carba ion  |
| 113 | Grignard's reagent on treatment with carbonyl compounds yield   | A. Pheonol<br>B. Alcohol<br>C. Alkane<br>D. None of these  |
| 114 | On warming with silver powder, chloroform is converted into   | A. Acetylene<br>B. Hexachloroethane<br>C. 1,1,2,2-tetrachloroethane<br>D. ethylene   |
| 115 | Thre rate of S <sub>N</sub> 2 reaction depends upon the   | A. Concentration of alkyl halides<br>B. Concentration of nucleophile<br>C. Concentration of alkyl halides and nucleophile<br>D. None of the above  |
| 116 | Any other aldehyde except formaldehyde on reaction with Grignard's will produce   | A. Secondary alcohol<br>B. Primary alcohol<br>C. Tertiary alcohol<br>D. Aromatic alcohol   |
| 117 | Alkyl halides are considered to be very reactive compounds towards nucleophiles because   | A. They have an electrophilic carbon<br>B. They have an electrophilic carbon and a good leaving group<br>C. They have an electrophilic carbon and a bad leaving group<br>D. They have a nucleophilic carbon and a good leaving group |
| 118 | The final product formed by distilling ethyl alcohol with excess of Cl <sub>2</sub> and Ca(OH) <sub>2</sub> is                              | A. CH <sub>3</sub> CHO<br>B. CCl <sub>3</sub> CHO<br>C. CHCl <sub>3</sub><br>D. (CH <sub>3</sub> ) <sub>2</sub> O  |
| 119 | Which halide among the following is used as methylating agent?  | A. CH <sub>3</sub> I<br>B. C <sub>2</sub> H <sub>5</sub> Cl<br>C. C <sub>2</sub> H <sub>5</sub> Br<br>D. C <sub>6</sub> H <sub>5</sub> Cl  |
| 120 | Halogens on treating with silver salts of acids give  | A. Alcohol<br>B. Ester<br>C. Phenol<br>D. Alkyl halide   |
|     |   | A. Propene<br>B. Propane   |

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| 121 | 1, 3-Dibromopropane reacts with metallic zinc to form   | <p>B. Propene</p> <p>C. Cyclopropane</p> <p>D. Hexane</p>   |
| 122 | Alkyl halides react with Mg in dry ether to form  | <p>A. Magnesium halide</p> <p>B. Grignard's reagent</p> <p>C. Alkene</p> <p>D. Alkyne</p>   |
| 123 | When chloroform is boiled with NaOH, it gives   | <p>A. Formic acid</p> <p>B. Trihydroxymethane</p> <p>C. Acetylene</p> <p>D. Sodium formate</p>  |
| 124 | C- X bond is strong in  | <p>A. <math>\text{CH}_3\text{Cl}</math></p> <p>B. <math>\text{CH}_3\text{Br}</math></p> <p>C. <math>\text{CH}_3\text{F}</math></p> <p>D. <math>\text{CH}_3\text{I}</math></p>   |
| 125 | What is the total number of different chloroethanes of formula $\text{C}_2\text{H}_5\text{Cl}_n$ possible (n may be 1 to 6)                       | <p>A. 6</p> <p>B. 8</p> <p>C. 9</p> <p>D. 10</p>  |
| 126 | Each of the following compounds is effective as a refrigerant. The release of which one of these causes the greatest depletion of the ozone layer | <p>A. <math>\text{CCl}_2\text{F}_2</math></p> <p>B. <math>\text{CH}_3\text{OCH}_3</math></p> <p>C. <math>\text{CHF}_2\text{Cl}</math></p> <p>D. <math>\text{CH}_2\text{ClCH}_2\text{Cl}</math></p>  |
| 127 | Reactivity of alkyl halides with magnesium is of the order:   | <p>A. <math>\text{RI} &gt; \text{RBr} &gt; \text{RCl} &gt; \text{RF}</math></p> <p>B. <math>\text{RBr} &gt; \text{RCl} &gt; \text{RF} &gt; \text{RI}</math></p> <p>C. <math>\text{RCl} &gt; \text{RF} &gt; \text{RI} &gt; \text{RBr}</math></p> <p>D. <math>\text{RF} &gt; \text{RI} &gt; \text{RBr} &gt; \text{RCl}</math></p> |
| 128 | Aryl halides are less reactive towards nucleophilic substitution reactions as compared to alkyl halides due to                                    | <p>A. The formation of less stable carbonium ion</p> <p>B. Resonance stabilization</p> <p>C. Larger carbon-halogen bond</p> <p>D. The inductive effect</p>  |
| 129 | A reaction in which an atom or a group of atoms replaces an atom or a group of atoms in the molecule of a substance is known as                   | <p>A. Addition reaction</p> <p>B. Condensation reaction</p> <p>C. Elimination reaction</p> <p>D. Substitution reaction</p>  |
| 130 | When primary amine reacts with chloroform in ethanolic KOH, then the product is   | <p>A. An isocyanide</p> <p>B. An aldehyde</p> <p>C. A cyanide</p> <p>D. An alcohol</p>  |
| 131 | Alkyl halides are considered to be very reactive compounds towards nucleophiles, because:   | <p>A. They have an electrophilic carbon</p> <p>B. They have an electrophilic carbon and good leaving group</p> <p>C. They have an electrophilic carbon and bad leaving group</p> <p>D. They have a nucleophilic carbon and good leaving group</p>   |
| 132 | $\text{S}_\text{N}2$ reaction can be best carried out with  | <p>A. Primary alkyl halides</p> <p>B. Secondary alkyl halides</p> <p>C. Tertiary alkyl halides</p> <p>D. All the three</p>  |
| 133 | Which of the following is a nucleophile   | <p>A. <math>\text{OH}^-</math></p> <p>B. <math>\text{CH}_3\text{CH}_2\text{CH}_3</math></p> <p>C. <math>\text{CH}_3\text{CH}_2\text{CH}_2^+</math></p> <p>D. <math>\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3</math></p>   |
| 134 | Which of the following does not give iodoform test?   | <p>A. Ethanol</p> <p>B. Ethanal</p> <p>C. Acetophenone</p> <p>D. Benzophenone</p>   |
| 135 | Among the following the most reactive towards alcoholic KOH is  | <p>A. <math>\text{CH}_2=\text{CHBr}</math></p> <p>B. <math>\text{CH}_3\text{COCH}_2\text{CH}_2\text{Br}</math></p> <p>C. <math>\text{CH}_3\text{CH}_2\text{CH}_2\text{Br}</math></p> <p>D. <math>\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{Br}</math></p>   |
| 136 | The most reactive compound for electrophilic nitration will be  | <p>A. Benzyl chloride</p> <p>B. Benzoic acid</p> <p>C. Nitrobenzene</p> <p>D. Chlorobenzene</p>   |
| 137 |    | <p>A. Electrophilic substitution</p> <p>B. Free radical reduction</p> <p>C. Isomerisation</p> <p>D. Nucleophilic substitution</p>   |
| 138 | The reaction between primary amine-chloroform and alcoholic caustic potash is called  | <p>A. Wurtz reaction</p> <p>B. Frankland reaction</p> <p>C. Cannizzaro's reaction</p> <p>D. Carbylamine reaction</p>  |



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| 139 | Which one of the following is not a nucleophile  | <p>A. <math>\text{HS}^{-}</math></p> <p>B. <math>\text{H}_2\text{S}</math></p> <p>C. <math>\text{BF}_3</math></p> <p>D. <math>\text{NH}_3</math></p>   |
| 140 | The reaction of 4-bromobenzyl chloride with NaCN in ethanol leads to   | <p>A. 4-Bromobenzyl cyanide</p> <p>B. 4-Cyanobenzyl chloride</p> <p>C. 4-Cyanobenzyl cyanide</p> <p>D. 4-Bromo 2-cyanobenzyl chloride</p>  |
| 141 | When ethyl iodide and n-propyl iodide are allowed to react with sodium metal in ether, the number of alkanes that could be produced is | <p>A. Only one</p> <p>B. Two alkanes</p> <p>C. Three alkanes</p> <p>D. Four alkanes</p>  |
| 142 | $\text{C}_6\text{H}_6\text{Cl}_6$ can be obtained from   | <p>A. HCl and Benzene</p> <p>B. <math>\text{Cl}_2</math> and Benzene and <math>\text{AlCl}_3</math></p> <p>C. <math>\text{Cl}_2</math> and Benzene in diffused light</p> <p>D. NaOCl and Benzene</p>   |
| 143 | The compounds or species in search of electrons are called   | <p>A. Electrophiles</p> <p>B. Nucleophile</p> <p>C. Nitrites</p> <p>D. Bases</p>   |
| 144 | DDT is formed from   | <p>A. Benzene and Chlorobenzene</p> <p>B. Chloral and Chlorobenzene</p> <p>C. Chloral and Benzene</p> <p>D. Chlorobenzene and chlorine</p>   |
| 145 | Alkyl halides on treatment with Zn and HCl gives   | <p>A. Alkanes</p> <p>B. Alkenes</p> <p>C. Alkynes</p> <p>D. Alcohols</p>   |
| 146 | Electronegativity order of alkyl halides is:   | <p>A. <math>\text{RI} &gt; \text{RBr} &gt; \text{RCI} &gt; \text{RF}</math></p> <p>B. <math>\text{RBr} &gt; \text{RCI} &gt; \text{RF} &gt; \text{RI}</math></p> <p>C. <math>\text{RCI} &gt; \text{RF} &gt; \text{RI} &gt; \text{RBr}</math></p> <p>D. <math>\text{RF} &gt; \text{RI} &gt; \text{RBr} &gt; \text{RI}</math></p> |
| 147 | Which of the following compounds gives trichloromethane on distilling with bleaching power?  | <p>A. Methanal</p> <p>B. Phenol</p> <p>C. Ethanol</p> <p>D. methanol</p>   |
| 148 | Unpleasant smell of carbylamine is obtained when chloroform and alcoholic KOH are heated with  | <p>A. Any aromatic amine</p> <p>B. Any primary amine</p> <p>C. Any amine</p> <p>D. Any aliphatic amine</p>   |
| 149 | Catalyst in the reaction $\text{ROH} + \text{SOCl}_2 \longrightarrow \text{RCl} + \text{SO}_2 + \text{HCl}$ is:                        | <p>A. <math>\text{ZnCl}_2</math></p> <p>B. Pyridine</p> <p>C. <math>\text{H}_2\text{SO}_4</math></p> <p>D. Ether</p>   |
| 150 | Alkyl halides in which a halogen atom is bonded to that carbon atom which directly bonded with one hydrogen atom is called             | <p>A. Primary alkyl halides</p> <p>B. Secondary alkyl halides</p> <p>C. Tertiary alkyl halides</p> <p>D. Quaternary alkyl halides</p>  |
| 151 | Alkyl halides on treatment with metallic Na give   | <p>A. Alkynes</p> <p>B. Alkenes</p> <p>C. Alkanes</p> <p>D. Alcohols</p>   |
| 152 | A set of compounds in which reactivity of halogen atom in the ascending order is   | <p>A. Chlorobenzene, vinyl chloride, chloroethane</p> <p>B. Chloroethane, chlorobenzene, vinyl chloride</p> <p>C. Vinyl chloride, chlorobenzene, chloroethane</p> <p>D. Vinyl chloride, chloroethane, chlorobenzene</p>  |
| 153 | Ethyl alcohol gives ethyl chloride with the help of  | <p>A. <math>\text{SOCl}_2</math></p> <p>B. NaCl</p> <p>C. <math>\text{Cl}_2</math></p> <p>D. KCl</p>   |
| 154 | Organic compounds containing halogen atom are called:  | <p>A. <math>\text{R-OH}</math></p> <p>B. <math>\text{R-X}</math></p> <p>C. <math>\text{R-NH}_2</math></p> <p>D. <math>\text{R-COH}</math></p>  |
| 155 | Reaction of Grignard's reagent with $\text{CO}_2$ gives:   | <p>A. Aldehyde</p> <p>B. Pri-alcohol</p> <p>C. Sec-alcohol</p> <p>D. Carboxylic acid</p>   |
| 156 | Which bond is most stable  | <p>A. C - Cl</p> <p>B. C - F</p> <p>C. C - Br</p> <p>D. C - I</p>  |

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| 157 | Reduction of alkyl halides give   | A. Alkanes<br>B. Alkenes<br>C. Ketones<br>D. Ether                                     |
| 158 | Hydrolysis of Grignard's reagent yields   | A. Alcohol<br>B. Aldehyde<br>C. Ester<br>D. Alkane                                     |
| 159 | In which of the following reactions is the inorganic reagent acting as a nucleophile  |  |
| 160 | Alcohol can be prepared from Grignard's reagent with an aldehyde: If we start with formaldehyde the product alcohol will be | A. Primary<br>B. Secondary<br>C. Tertiary<br>D. Aromatic                               |
| 161 | For which mechanisms, the first step involved is the same:  | A. $E_1$ and $E_2$<br>B. $E_2$ and $SN_2$<br>C. $E_2$ and $E_1$<br>D. $E_1$ and $SN_1$ |
| 162 | $Cl_2$ reacts with $CS_2$ in presence of $AlCl_3$ to form   | A. $CHCl_3$<br>B. $CCl_4$<br>C. $C_2H_5Cl$<br>D. $C_2H_6Cl$                            |
| 163 | The chloroform reacts with NaOH to give   | A. $CH_3COONa$<br>B. Sodium oxalate<br>C. $CH_3OH$<br>D. $HCOONa$                      |
| 164 | The alkyl halide is converted into an alcohol by  | A. Addition<br>B. Substitution<br>C. Dehydrohalogenation<br>D. Elimination             |
| 165 | Grignard's reagent was prepared in:   | A. 1900<br>B. 1910<br>C. 1920<br>D. 1930   |