



CHEMISTRY POINT

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TIME-2hr 30min

No of Question- 100

Marks- 100

1.	Among the following the one that gives positive iodoform test upon reaction with I_2 and NaOH is			
	a)	$CH_3CH_2CH(OH)CH_2CH_3$		
	b)	$C_6H_5CH_2CH_2OH$		
	c)	$\begin{array}{c} H_3C-CH-CH_2OH \\ \\ CH_3 \end{array}$		
	d)	$PhCHOHCH_3$		
2.	Vicinal and geminal dihalides can be distinguished by:			
	a)	b)	c)	d)
	KOH(aq.)	KOH(alc.)	Zn dust	None of these
3.	An alkyl halide may be converted into an alcohol by:			
	a)	b)	c)	d)
	Addition	Substitution	Dehydrohalogenation	Elimination
4.	Dehydrohalogenation in haloalkanes produces:			
	a)	b)	c)	d)
	A single bond	A double bond	A triple bond	Fragmentation
5.	Chlorination of CS_2 gives:			
	a)	b)	c)	d)
	CCl_4	CS_2Cl_2	CH_4	$CHCl_3$
6.	Methylene chloride on hydrolysis yields:			
	a)	b)	c)	d)
	HCHO	CH_3CHO	$CHCl_3$	CH_3COCl
7.	The greater the ionic character of the carbon metal bond:			
	a) The more reactive is the organometallic compound			
	b) The less reactive is the organometallic compound			
	c) Both are correct			
	d) None of the above is correct			
8.	For the reaction, $C_2H_5OH + HX \xrightarrow{ZnX_2} C_2H_5X$, the order of reactivity is:			
	a)	b)	c)	d)
	$HI > HCl > HBr$	$HI > HBr > HCl$	$HCl > HBr > HI$	$HBr > HI > HCl$



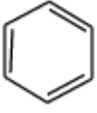
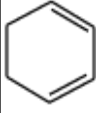
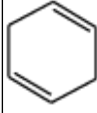
9.	The order of reactivities of methyl halides in the formation of Grignard reagent is	
	a) $\text{CH}_3\text{I} > \text{CH}_3\text{Br} > \text{CH}_3\text{Cl}$	b) $\text{CH}_3\text{Cl} > \text{CH}_3\text{Br} > \text{CH}_3\text{I}$
	c) $\text{CH}_3\text{Br} > \text{CH}_3\text{Cl} > \text{CH}_3\text{I}$	d) $\text{CH}_3\text{Br} > \text{CH}_3\text{I} > \text{CH}_3\text{Cl}$
10.	The antiseptic character of iodoform is due to:	
	a) Its poisonous nature	
	b) Unpleasant smell	
	c) Liberation of free iodine	
	d) None of the above	
11.	On treating a mixture of two alkyl halides with sodium metal in dry ether, 2-methyl propane was obtained. The alkyl halides are	
	a) 2-chloropropane and chloromethane	b) 2-chloropropane and chloroethane
	c) Chloromethane and chloroethane	d) Chloromethane and 1-chloropropane
12.	The IUPAC name of the compound, $(\text{CH}_3)_2\text{CHCH}_2\text{CH}_2\text{Br}$ is:	
	a) 2-methyl-3-bromopropane	
	b) 1-bromopentane	
	c) 2-methyl-4-bromobutane	
	d) 1-bromo-3-methylbutane	
13.	The given reaction is an example of, $\text{C}_2\text{H}_5\text{Br} + \text{KCN}(\text{aq.}) \rightarrow \text{C}_2\text{H}_5\text{CN} + \text{KBr}$:	
	a) Elimination	
	b) Nucleophilic substitution	
	c) Electrophilic substitution	
	d) Redox change	
14.	Which one of the following compound reacts with chlorobenzene to produce DDT?	
	a) Acetaldehyde	b) Nitrobenzene
	c) m-chloroacetaldehyde	d) Trichloroacetaldehyde
15.	Preparation of alkyl halides in laboratory is least preferred by:	
	a) Halide exchange	
	b) Direct halogenation of alkanes	



	c) Treatment of alcohols
	d) Addition of hydrogen halides to alkenes
16.	Which one of the following pairs is the strongest pesticide?
	a) Chloroform and benzene hexachloride b) DDT and 666
	c) 666 and ether d) isocyanides and alcohol
17.	Iodoform gives a precipitate with AgNO_3 on heating but chloroform does not because:
	a) Iodoform is ionic
	b) Chloroform is covalent
	c) C–I bond in iodoform is weak and C–Cl bond in chloroform is strong
	d) None of the above
18.	Which reagent is useful in increasing the carbon chain of an alkyl halide?
	a) HCN b) KCN c) NH_4CN d) AgCN
19.	Chloroform on reaction with conc. HNO_3 gives an insecticide and war gas known as:
	a) Chloropicrin b) Nitromethane c) Picric acid d) Acetylene
20.	Aryl halides are less reactive towards electrophiles than alkyl halides due to:
	a) Resonance
	b) Stability of carbonium ions
	c) High boiling point
	d) None of the above
21.	Carbon tetrachloride reacts with steam at 500°C to give:
	a) COCl_2 b) CHCl_3 c) Both (a) and (b) d) None of these
22.	Chloroform on reaction with acetone yields:
	a) Insecticide b) Hypnotic agent c) Analgesic d) Isocyanide
23.	In Wurtz reaction alkyl halide reacts with
	a) Sodium in ether b) Sodium in dry ether c) Sodium only d) Alkyl halide in ether
24.	When iodoform is heated with silver powder it forms:
	a) Acetylene b) Ethylene c) Methane d) Ethane
25.	1,3-dibromopropane reacts with metallic zinc to form:



	a) Propene	b) Cyclopropane	c) Propane	d) Hexane
26.	In the reaction sequence <div style="text-align: center;"> $X \xrightarrow[\text{FeCl}_3]{\text{Cl}_2} Y \xrightarrow[\text{H}_2\text{SO}_4]{\text{CHO}} \text{C} \begin{array}{c} \text{C Cl}_3 \\ \\ \text{H} \end{array}$ </div> Compound 'X' is			
	a) Chlorobenzene	b) Benzene	c) Toluene	d) Biphenyl methane
27.	Which is used as a general anaesthetic in place of diethyl ether?			
	a) $\text{CF}_3-\text{CHClBr}$	b) $\text{CF}_3-\text{CHCl}_2$	c) $\text{CF}_3-\text{CHBr}_2$	d) None of these
28.	Which of the following ketones will not respond to iodoform test?			
	a) Methyl isopropyl ketone		b) Ethyl isopropyl ketone	
	c) Dimethyl ketone		d) 2-hexanone	
29.	Propyl iodide and isopropyl iodide are:			
	a) Functional isomers	b) Chain isomers	c) Metamers	d) Position isomers
30.	$X + \text{KCN} \rightarrow \text{CH}_3\text{CN} \xrightarrow{2\text{H}_2/\text{Ni}} \text{CH}_3\text{CH}_2\text{NH}_2$ What is (X)?			
	a) $\text{CH}_3\text{CH}_2\text{Cl}$	b) CH_3Cl	c) $\text{CH}_3\text{CH}_2\text{CH}_2\text{Cl}$	d) $(\text{CH}_3)_2\text{CHCl}$
31.	2-chlorobutane obtained by chlorination of butane, will be:			
	a) meso-form	b) Racemic form	c) d-form	d) l-form
32.	Reaction of alkyl halides with aromatic compounds in presence of anhy. AlCl_3 is known as			
	a) Friedel-Craft's reaction		b) Hofmann degradation	
	c) Kolbe's synthesis		d) Beckmann rearrangement	
33.	Which of the following statements is incorrect regarding benzyl chloride?			
	a) It gives white precipitate with alcoholic AgNO_3			
	b) It is an aromatic compound with substitution in the side chain			
	c) It undergoes nucleophilic substitution reaction			
	d) It is less reactive than vinyl chloride			

34.	Which of the following compounds is not formed in iodoform reaction of acetone?			
	a) $\text{CH}_3\text{COCH}_2\text{I}$	b) $\text{ICH}_2\text{COCH}_2\text{I}$	c) $\text{CH}_3\text{COCHI}_2$	d) CH_3COCl_3
35.	Of the isomeric hexanes, the isomers that give the minimum and maximum number of monochloro derivatives are respectively			
	a) 3-methylpentane and 2, 3-dimethylbutane	b) 2, 3-dimethylbutane and <i>n</i> -hexane		
	c) 2, 2-dimethylbutane and 2-methylpentane	d) 2, 3-dimethylbutane and 2-methylpentane		
36.	1, 2-dibromo cyclohexane on dehydrogenation gives			
	a) 	b) 	c) 	d) None of these
37.	Ethyl ortho formate is formed by heating with sodium ethoxide.			
	a) CHCl_3	b) $\text{C}_2\text{H}_5\text{OH}$	c) HCOOH	d) CH_3CHO
38.	Chloroform is kept in dark coloured bottles because:			
	a) It is inflammable			
	b) It gives a peroxide			
	c) It undergoes rapid chlorination			
	d) It is oxidized to poisonous phosgene			
39.	Which of the following will not respond to iodoform test?			
	a) Ethyl alcohol	b) Propanol-2	c) Propanol-1	d) Ethanal
40.	At higher temperature, iodoform reaction is given by:			
	a) $\text{CH}_3\text{COOCH}_3$	b) $\text{CH}_3\text{COOC}_2\text{H}_5$	c) $\text{C}_6\text{H}_5\text{COOCH}_3$	d) $\text{CH}_3\text{COOC}_6\text{H}_5$
41.	Molecular formula of chloropicrin is			
	a) CHCl_3NO_2	b) CCl_3NO_3	c) CCl_2NO_2	d) CCl_3NO_2
42.	Which one of the following is not true for the hydrolysis of <i>t</i> -butyl bromide with aqueous NaOH?			
	a) Reaction occurs through the $\text{S}_{\text{N}}1$ mechanism.			
	b) The intermediate formed is a carbocation.			
	c) Rate of the reaction doubles when the concentration of alkali is doubled.			
	d) Rate of the reaction doubles when the concentration of <i>t</i> -butyl bromide is doubled.			
43.	CHCl_3 reacts with conc. HNO_3 to give			

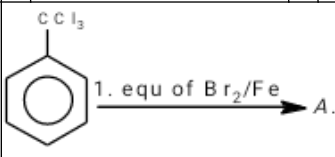
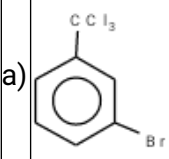
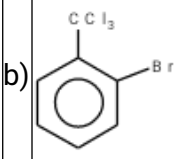
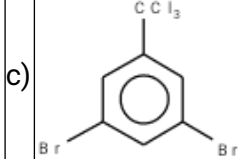
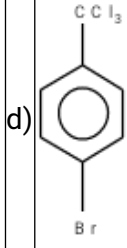
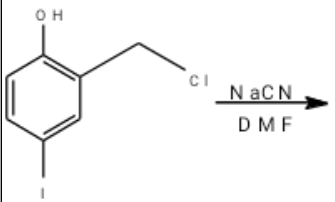
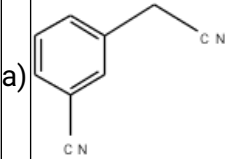
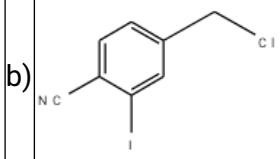
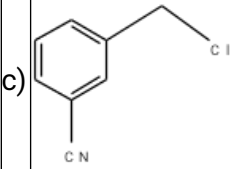
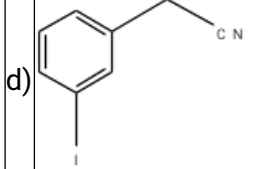


	a) CCl_3NO_2	b) CH_3NO_2	c) CH_3CN	d) $\text{CH}_3\text{CH}_2\text{NO}_2$
44.	The correct order of melting and boiling points of the primary (1°), secondary (2°) and tertiary (3°) alkyl halides is:			
	a) $\text{P} > \text{S} > \text{T}$	b) $\text{T} > \text{S} > \text{P}$	c) $\text{S} > \text{T} > \text{P}$	d) $\text{T} > \text{P} > \text{S}$
45.	Ethyl alcohol gives ethyl chloride on treatment with:			
	a) NaCl	b) SOCl_2	c) Cl_2	d) KCl
46.	20% aqueous solution of sodium chloride containing ethyl alcohol on electrolysis gives:			
	a) Ethyl chloride	b) Chloral	c) Acetaldehyde	d) Chloroform
47.	Which of the following statements about benzyl chloride is incorrect?			
	a) It is less reactive than alkyl halides			
	b) It can be oxidised to benzaldehyde by boiling with copper nitrate solution			
	c) It is a lachrymatory liquid and answers Beilstein's test			
	d) It gives a white precipitate with alcoholic silver nitrate			
48.	The $\text{S}_{\text{N}}1$ reactivity of ethyl chloride is:			
	a) More or less equal to that of benzyl chloride			
	b) Less than that of benzyl chloride			
	c) More or less equal to that of chlorobenzene			
	d) Less than that of chlorobenzene			
49.	Which of the following will not give iodoform test?			
	a) Isopropyl alcohol			
	b) Ethanol			
	c) Ethanal			
	d) Benzyl alcohol			
50.	Elimination of HBr from 2-bromobutane results in the formation of:			
	a) Equimolar mixture of 1- and 2- butene			
	b) Predominantly 2-butene			
	c) Predominantly 1- butene			
	d) Predominantly 2-butyne			



51.	1,2-dibromoethane is added to prevent deposition of lead metal in :
	a) Water pipes
	b) Petrol engines
	c) Electric heaters
	d) Metal working lathe machines
52.	For the reaction, $\begin{array}{c} \text{CH}_3\text{CH} \cdot \text{CH}_2\text{CH}_3 \\ \\ \text{X} \end{array} \xrightarrow[475\text{K}]{\text{H}_2\text{SO}_4}$ $\begin{array}{l} \rightarrow \text{CH}_3-\text{CH}=\text{CH}-\text{CH}_3 \\ \rightarrow \text{CH}_2=\text{CH}-\text{CH}_2-\text{CH}_3 \end{array}$
	a) $\text{CH}_3-\text{CH}=\text{CH}-\text{CH}_3$ predominates
	b) $\text{CH}_2=\text{CH}-\text{CH}_2-\text{CH}_3$ predominates
	c) Both are formed in equal amounts
	d) The product ratio is dependent on the halogen X
53.	Grignard reagent is prepared by the reaction between:
	a) Zinc and alkyl halide
	b) Magnesium and alkyl halide
	c) Magnesium and alkane
	d) Magnesium and aromatic hydrocarbon
54.	In the following swquence of reactions $\text{CH}_3-\text{Br} \xrightarrow{\text{KCN}} \text{A} \xrightarrow{\text{H}_3\text{O}^+} \text{B} \xrightarrow[\text{Ether}]{\text{LiAlH}_4} \text{C}$ the end product (C) is:
	a) Acetaldehyde
	b) Ethyl alcohol
	c) Acetone
	d) Methane
55.	The IUPAC name of the compound, $\begin{array}{c} \text{CH}_3\text{COCH}-\text{CHCOOH} \\ \quad \\ \text{Cl} \quad \text{Br} \end{array}$ is:
	a) 2-bromo-3-chloro-4-oxopentanoic acid
	b) 3-chloro-2-bromo-4-oxopentanoic acid
	c) 4-carboxybromo-3-chloro-2-butanone



	d) None of the above			
56.	Which of the following is primary halide?			
	a) Isopropyl halide	b) Sec-butyl halide	c) Tert-butyl halide	d) Neo-hexyl chloride
57.	 <p>Compound A is</p>			
				
58.	Which of the following do not form Grignard reagent?			
	a) CH_3F	b) CH_3Cl	c) CH_3Br	d) CH_3I
59.	The structure of the major product formed in the following reaction is			
				
				
				
60.	Butane nitrile may be prepared by heating:			
	a) Propyl alcohol with KCN			
	b) Butyl alcohol with KCN			

	c) Butyl chloride with KCN
	d) Propyl chloride with KCN
61.	Consider the following reaction, $\text{H}_3\text{C}-\underset{\text{D}}{\underset{ }{\text{C}}}\text{H}-\underset{\text{CH}_3}{\underset{ }{\text{C}}}\text{H}-\text{CH}_3 + \overset{\cdot}{\text{B}}\text{r} \rightarrow \text{'X'} + \text{HBr}$ Identify the structure of the major product 'X':
	a) $\text{H}_3\text{C}-\underset{\text{D}}{\underset{ }{\text{C}}}\text{H}-\underset{\text{CH}_3}{\underset{ }{\text{C}}}\text{H}-\overset{\cdot}{\text{C}}\text{H}_2$
	b) $\text{H}_3\text{C}-\underset{\text{D}}{\underset{ }{\text{C}}}\text{H}-\overset{\cdot}{\text{C}}\text{H}-\text{CH}_3$
	c) $\text{H}_3\text{C}-\overset{\cdot}{\text{C}}-\underset{\text{D}}{\underset{ }{\text{C}}}\text{H}-\text{CH}_3$
	d) $\text{H}_3\text{C}-\overset{\cdot}{\text{C}}\text{H}-\underset{\text{CH}_3}{\underset{ }{\text{C}}}\text{H}-\text{CH}_3$
62.	A mixture of 1-chloropropane and 2-chloropropane when treated with alcoholic KOH, it gives:
	a) 1-propene
	b) 2-propene
	c) Isopropylene
	d) A mixture of 1-propene and 2-propene
63.	In Wurtz reaction of alkyl halides with sodium, the reactivity order of these halides is:
	a) $\text{RI} > \text{RBr} > \text{RCl}$
	b) $\text{RCl} > \text{RBr} > \text{RI}$
	c) $\text{RBr} > \text{RI} > \text{RCl}$
	d) None of these
64.	A mixture of sodium acetate and sodalime is heated and the product treated with excess of chlorine in presence of bright sunlight. The product is:
	a) CH_3COOH
	b) CH_2BrCOOH
	c) CCl_4
	d) CH_3Cl
65.	1-chlorobutane on reaction with alcoholic KOH gives:
	a) 1-butene
	b) 1-butanol
	c) 2-butene
	d) 2-butanol
66.	Which halide does not get hydrolysed by sodium hydroxide?
	a) Vinyl chloride
	b) Methyl Chloride
	c) Ethyl chloride
	d) Isopropyl chloride
67.	Iodoform test is not given by
	a) 2-pentanone
	b) Ethanol
	c) Ethanal
	d) 3-pentanone
68.	The alkyl halides that can be made by free radical halogenation of alkanes are



a) RCl and RBr but not RF or RI	b) RF, RCl and RBr but not RI
c) RF, RCl, RBr, RI	d) RF, RCl and RI but not RBr
69. Non-sticking frying pans are coated with:	
a) Ethylene	
b) Styrene	
c) Tetrafluoroethylene (Teflon)	
d) Chlorofluoro methane	
70. Ethyl chloride on heating with AgCN forms a compound X. The functional isomer of X is	
a) C_2H_5NC	b) $C_2H_5NH_2$
c) C_2H_5CN	d) None of these
71. Chlorine is most reactive towards NaOH in:	
a) CH_3Cl	b) $CH_2=CHCl$
c) C_6H_5Cl	d) $C_6H_5CH_2Cl$
72. The chemical formula of 'tear gas' is	
a) $COCl_2$	b) CO_2
c) Cl_2	d) CCl_3NO_2
73. The order of polarity of CH_3I , CH_3Br and CH_3Cl molecules follows the order:	
a) $CH_3Br > CH_3Cl > CH_3I$	
b) $CH_3I > CH_3Br > CH_3Cl$	
c) $CH_3Cl > CH_3Br > CH_3I$	
d) $CH_3Cl > CH_3I > CH_3Br$	
74. Chloroform gives a trichloro derivative of an alcohol on reaction with	
a) conc. nitric acid	b) aq. alkali
c) acetone and alkali	d) a primary amine and an alkali
75. In order to convert aniline into chlorobenzene the reagent used is	
a) $NaNO_2/HCl, CuCl$	b) Cl_2/CCl_4
c) $Cl_2/AlCl_3$	d) $CuCl_2$
76. Number of monochloro derivatives obtained when neo-pentane is chlorinated, is	
a) One	b) Two
c) Three	d) Four
77. Which of the following will not form a yellow precipitate on heating with an alkaline solution of iodine?	
a) $CH_3CH(OH)CH_3$	b) $CH_3CH_2CH(OH)CH_3$
c) CH_3OH	d) CH_3CH_2OH



78.	$\text{CaOCl}_2 + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2 + \text{X}$ $\text{X} + \text{CH}_3\text{CHO} \rightarrow \text{Y}$ $\text{Y} + \text{Ca(OH)}_2 \rightarrow \text{CHCl}_3$. What is 'Y'?			
	a) $\text{CH}_3\text{CH(OH)}_2$	b) CH_2Cl_2	c) CCl_3CHO	d) $\text{CCl}_3\text{COCH}_3$
79.	Reaction of trans-2-phenyl-1-bromocyclopentane on reaction with alcoholic KOH produces			
	a) 4-phenylcyclopentene		b) 2-phenylcyclopentene	
	c) 1-phenylcyclopentene		d) 3-phenylcyclopentene	
80.	In order to get ethanethiol from $\text{C}_2\text{H}_5\text{Br}$, the reagent used is:			
	a) Na_2S	b) NaHS	c) KCNS	d) K_2S
	Solvent used in dry-cleaning of clothes is:			
	a) Alcohol	b) Acetone	c) Carbon tetrachloride	d) freon
82.	Correct order of reactivity for halides is:			
	a) Vinyl chloride > allyl chloride > propyl chloride			
	b) Propyl chloride > vinyl chloride > allyl chloride			
	c) Allyl chloride > propyl chloride > vinyl chloride			
	d) None of the above			
83.	The substance employed as tear gas is:			
	a) Westron	b) Chloropicrin	c) Chloretone	d) None of these
84.	One of the following that cannot undergo dehydrohalogenation is			
	a) iso-propyl bromide	b) ethanol	c) Ethyl bromide	d) None of the above
85.	The starting material for the preparation of CHI_3 is:			
	a) $\text{C}_2\text{H}_5\text{OH}$	b) CH_3OH	c) $\text{C}_2\text{H}_5\text{CHO}$	d) HCHO
86.	Optically active compound is:			
	a) 2-chloropropane	b) 2-chlorobutane	c) 3-chloropentane	d) None of these
87.	CCl_4 is insoluble in water because:			
	a) Water is non-polar			
	b) CCl_4 is non-polar			



	c) Water and CCl ₄ are polar
	d) None of the above
88.	Which one is most reactive towards S _N 1 reactions?
	a) C ₆ H ₅ CH(C ₆ H ₅)Br b) C ₆ H ₅ CH(CH ₃)Br c) C ₆ H ₅ C(CH ₃)(C ₆ H ₅)Br d) C ₆ H ₅ CH ₂ Br
89.	Which of the following applies in the reaction, $\text{CH}_3\text{CHBrCH}_2\text{CH}_3 \xrightarrow{\text{Alc.KOH}}$ (i) CH ₃ CH = CHCH ₃ (major product) (ii) CH ₂ = CHCH ₂ CH ₃ (minor product)
	a) Markownikoff's rule b) Saytzeff's rule c) Kharasch effect d) Hofmann's rule
90.	The following compound on hydrolysis in aqueous acetone will give
	(K)
	(L)
	(M)
	a) Mixture of (K) and (L) b) Mixture of (K) and (M)
	c) Only (M) d) Only (K)
91.	The metal used for the de-bromination reaction of 1, 2-dibromoethane.
	a) Na b) Zn c) Mg d) Li
92.	Reaction of <i>t</i> -butyl bromide with sodium methoxide produces
	a) Isobutane
	b) Isobutylene

	c) Sodium <i>t</i> -butoxide		
	d) <i>t</i> -butylmethyl ether		
93.	$\text{CH}_3\text{Br} + \text{KCN}(\text{alc.}) \rightarrow \text{X}$ $\xrightarrow[\text{Na+C}_2\text{H}_5\text{OH}]{\text{Reduction}} \text{Y}$ What is Y in the series?		
	a) CH_3CN	b) $\text{C}_2\text{H}_5\text{CN}$	c) $\text{C}_2\text{H}_5\text{NH}_2$
94.	If methyl iodide and ethyl iodide are mixed in equal proportions, and the mixture is treated with metallic sodium in presence of dry ether, the number of possible products formed is:		
	a) 2	b) 3	c) 1
95.	An alkyl iodide on standing darkens, due to:		
	a) Hydrolysis		
	b) Conversion into ether		
	c) Liberation of iodine		
	d) Formation of alkanes		
96.	X compound reacts with Na to give $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_3$, then compound X is		
	a) $\text{CH}_3\text{CH}_2\text{OH}$		
	b) $\text{CH}_3\text{CH}_2\text{-Cl}$		
	c) $\text{CH}_3\text{-CH}_3$		
	d) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$		
97.	Maximum number of molecules of CH_3I that can react with a molecule of CH_3NH_2 are		
	a) 3	b) 4	c) 2
			d) 1
98.	The CCl_4 and CHCl_3 can be distinguished by the action of:		
	a) $\text{RNH}_2 + \text{KOH alc.}$	b) $\text{RCN} + \text{KOH alc.}$	c) Hydrolysis
			d) Burning in air
99.	Alkyl halides reacts with dialkyl lithium cuprate to give:		
	a) Alkenes	b) Alkyl Cu halide	c) Alkanes
			d) Alkenyl halide
100	Which responds to the iodoform test?		
	a) Butanol	b) Butan-1-al	c) Butanone-2
			d) 3-pentanone



