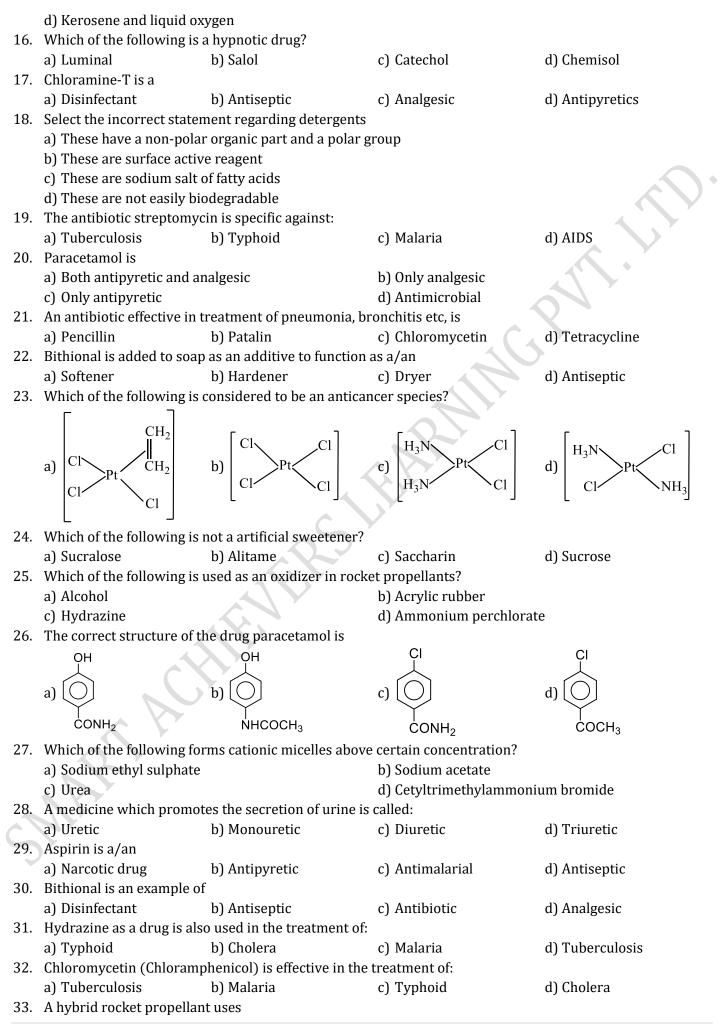
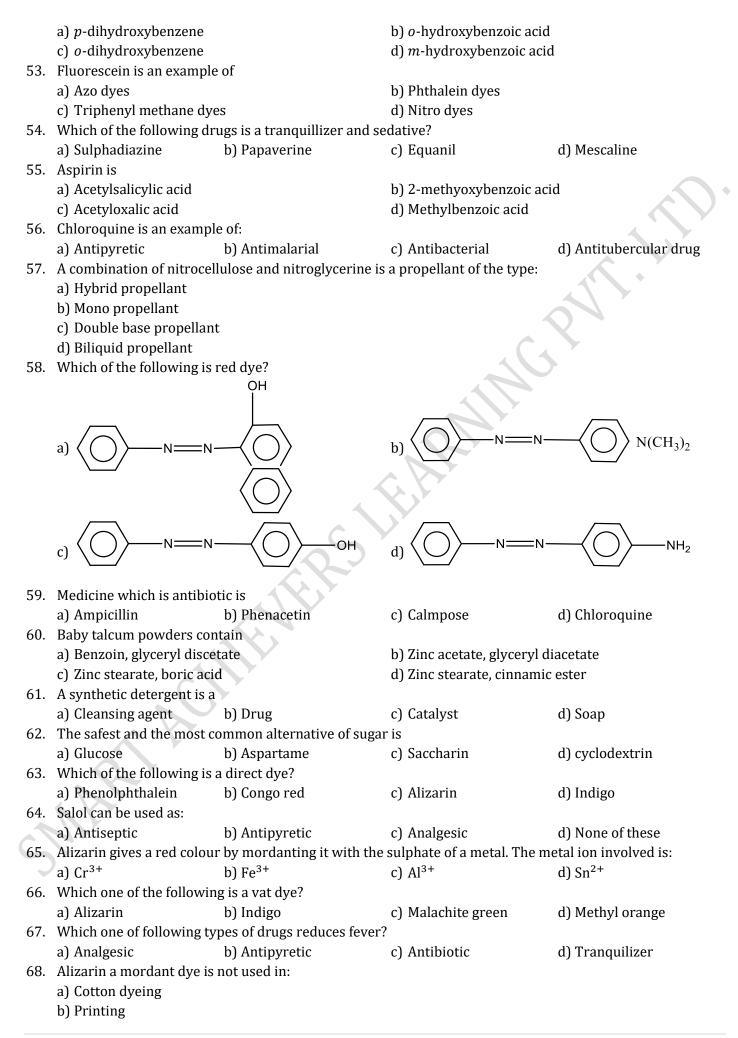
#### CHEMISTRY

#### Single Correct Answer Type

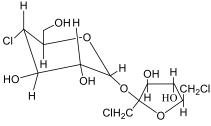
1.	Salol can be used as			
	a) Antiseptic b) Ant	tipyretic	c) Analgesic	d) Disinfectant
2.	Which of the following is an anti-	oyretic?		
	a) Quinine b) Par	acetamol	c) Luminal	d) Poperazine
3.	Which of the following is an exam	nple of basic dye?		
	a) Alizarin b) Ma	lachite green	c) Indigo	d) Orange I
4.	Which of the following is not ant	ibiotic?		
	a) Tetracyclin b) Neo	omycin	c) Carbomycin	d) Cyclohexane
5.	Fluoresce in, a well known dye is	obtained by the rea	ctions of:	$\sim$
	a) Phthalic anhydride and pheno	l		X .
	b) Phthalic anhydride and resord	inol		
	c) Succinic acid and resorcinol			
	d) Phthalic anhydride and catech	ol		
6.	Which of the following is bacterie	ostatic?		
	a) Penicillin b) Ery	rthromycin	c) Amino glycodine	d) Ofloxacin
7.	One of the most widely used drug	g in medicine, iodex	is:	
	a) Methyl salicylate			
	b) Ethyl salicylate			
	c) Acetyl salicylic acid			
	d) <i>o</i> -hydroxy benzoic acid	C		
8.	The substances which effect the	central nervous syst	em and induce sleep are ca	illed:
	a) Tranquillizers b) Ant	tipyretics	c) Analgesics	d) None of these
9.	Methyl orange is an indicator in a	acid-alkali titration.	It gives:	
	a) Yellow colour in alkaline medi	ium		
	b) Red colour in acid medium			
	c) Yellow colour in acid medium			
	d) Yellow colour in alkaline medi	um and red colour i	n acid medium	
10.	Red ink is prepared from:			
	a) Phenol b) Ani		c) Congo red	d) Eosin
11.	An insoluble dye is reduced to a s			
	soaked in the dye solution and th	•		
	a) Mordant dye b) Vat	5	c) Azo dye	d) Direct dye
12.	Tranquillizers are substances use			
	a) Cancer b) AID		c) Mental diseases	d) Physical disorders
13.	Detergents obtained from LAB and	-		
	a) Laboratory tested raw materia	al	b) Low anionic balance	
	c) Linear alkyl benzene		d) None of the above	
14.	Phenacetin is used as:			
		tiseptic	c) Antimalarial	d) Analgesic
15.	The propellant in the proposed P	SLV rocket of the In	dian space programme sha	all consist of:
	a) A composite solid propellant			
	b) Biliquid propellants such as N		al dimethyl hydrazine (UD	MH) and $N_2O_4$ +
	<sup>5</sup> monomethyl hydrazine (MMH			
	c) Both (a) and (b) in different st	tages of rocket prop	ulsion	



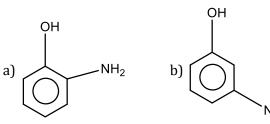
	a) A liquid oxidizer and a	solid fuel	b) A composite solid prop	
	c) A biliquid propellant		d) A solid, liquid and gas a	as a propellant
34.	Which of the following is	-		
	a) —N=N—	b) —NO	c) $-NO_2$	d) $-NH_2$
35.		g 99% $\gamma$ -isomer of benzene		
	a) Lindane	b) TNT	c) Malathion	d) Methoxychlor
36.		d in Bhopal tragedy from th		
	a) CO	b) Methyl isocyanate	c) Phosgene	d) Chloropicrin
37.		ntiseptic, dettol is a mixture	•	
	a) Bithional	b) Chloroxylenol	c) <i>o</i> -cresol	d) Serotonin
38.	The formulation of Dettol			
20	a) Chloroxylenol	b) Terpineol	c) Alcohol	d) All of these
39.	The blue print process inv		a) I	J) 79
40	a) Indigo dyes	b) Vat dyes	c) Iron compounds	d) Zinc compounds
40.	Chloramphenicol is used a a) Analgesic		a) Antibiatia	d) Anticontia
11	, 0	b) Anaesthetic g is employed as antihistan	c) Antibiotic	d) Antiseptic
41.	a) Omeprazole	b) Chloramphenicol	c) Diphenyl hydramine	d) Norothindrone
12	Which of the following is a	<i>,</i>	c) Diplienyl nyuranine	uj Norodilliurolle
42.	a) Methedrine	b) Calmpose	c) LSD	d) Seconal
43	,	by the action of $H_2SO_4$ follo		,
15.	a) Choesterol	b) Lauryl alcohol	c) Cyclohexanol	d) <i>p</i> -nitrophenol
44	The drug	b) Laaryr alcollol	ej dyelonexanor	a) p incrophenor
	H			
	N		$\nabla^{r}$	
	CH <sub>2</sub>	C Y		
	Ν΄			
	ĊH <sub>2</sub> N	IH <sub>2</sub> is used as		
	a) Vasodilator	b) Analgesics	c) Antacid	d) Antiseptic
45.	Which of the following is a	not a surfactant?	,	, i
	a) $CH_3 - (CH_2)_{15} - N^+(CH_2)_{15}$		b) $CH_3 - (CH_2)_{14} - CH_2N_2$	IH <sub>2</sub>
	c) $CH_3 - (CH_2)_{16} - CH_2O_{16}$	SO <sub>2</sub> Na <sup>+</sup>	d) OHC – $(CH_2)_{14}$ – $CH_2$	– COO <sup>–</sup> Na <sup>+</sup>
46.	Sulpha drugs are used for			
	a) Precipitating bacteria			
	b) Removing bacteria			
	c) Decreasing the size of b	pacteria		
	d) Stopping the growth of	bacteria		
47.	Indigo belongs to the class	s of:		
	a) Mordant dye	b) Vat dye	c) Direct dye	d) Disperse dye
48.		es, tincture of iodine (2-3%)	$I_2$ in water/alcohol) and so	ome dyes like methylene
	blue are:			
	a) Antiseptics	b) Disinfectants	c) Analgesics	d) Antipyretics
49.	Acetoxy benzoic acid is:			
-	a) Antiseptic	b) Aspirin	c) Antibiotic	d) Mordant dye
50.	Which one is an antibiotic			
٣1	a) Aspirin	b) Chloromycetin	c) Chloroquin	d) Madribon
51.		g is known as broad spectr		d) Donicillin C
ГO	a) Streptomycin	b) Ampicillin	c) Chloramphenicol	d) Penicillin G
52.	Aspirin is an acetylation p			

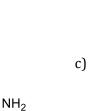


- c) Painting
- d) Chromium lakes for wood dyeing
- 69. The following structure represents



a) Sucroseb) Sucralosec) Aspartamed) Alitame70.Which of the following gives paracetamol on acetylation?d) Alitame







d) OH

и́нсосн₃

71.	Which of the following is a	a natural dye?		
	a) Martius yellow	b) Alizarin	c) Phenolphthalein	d) Orange I
72.	Medicine which is an antil	piotic is		
	a) Ampicillin	b) Aspirin	c) Compose	d) All of these
73.	Cocaine is:			
	a) Vitamin	b) Poison	c) Medicine	d) Antipyretic
74.	Hippuric acid has the form	nula		
	a) CH <sub>3</sub> CONHCH <sub>2</sub> COOH		b) C <sub>6</sub> H <sub>5</sub> CONHCH <sub>2</sub> COOH	
	c) C <sub>6</sub> H <sub>5</sub> NHCOOH		d) NH <sub>2</sub> CONHCOOH	
75.	Which of the following is a	not an antipyretic?		
	a) Aspirin	b) Paracetamol	c) Barbituric acid	d) Phenacetin
76.	An azo dye is fixed on fabr	rics by the process applical	ole in:	
	a) Vat dyes	b) Mordant dyes	c) Developed dyes	d) Substantive dyes
77.	Aspirin is an acetylation p			
	a) o-hydroxybenzoic acid		b) <i>o</i> -hydroxybenzene	
	c) <i>m</i> -hydroxybenzoic acid	l	d) <i>p</i> -dihydroxybenzene	
78.	Which statement is false?			
		be used antiseptics at low	concentration	
	b) Sulphadiazine is a synth			
	c) Ampicillin is a natural a			
	d) Aspirin is analgesic and			
79.			f metallic salts on dyes is k	
	a) Lake	b) Mordant	c) Dye intermediate	d) None of these
80.	Which of the following is a	a germicide also?		
	a) Cationic detergent		b) Anionic detergent	
	c) Non-ionic detergent		d) None of the above	
81.	An azo dye is formed by ir	iteraction of an aromatic d	iazonium chloride with:	
	a) A phenol			
	b) An aliphatic primary an	nine		
	c) Benzene			
	d) Nitrous acid			

~~				
82.	Which of the following is n			
	a) Iodoform	b) Dettol	c) Gammexane	d) Genatian violet
83.		ect the central nervous syst	=	
	a) Antipyretics	b) Tranquilizers	c) Analgesics	d) None of these
84.	An example of a liquid pro			
	a) Liquid $N_2O_4$ + kerosene	e		
	b) $HNO_3 + HCl$			
	c) $H_2SO_4$ + hydrazine			
	d) None of the above			
85.	Sodium alkyl benzene sulj			
	a) Soap	b) Fertilizer	c) Detergent	d) Pesticide
86.	Which of the following dru			
	a) Sulphaguanidine	b) Paludrin	c) Analgin	d) Iodex
87.	Which of the following is a			
	a) Congo-red	b) Aniline black	c) Alizarin	d) Indigo
88.	Oral contraceptive drugs			X
	a) Mestranol	b) Norethindrone	c) Both (a) and (b)	d) None of these
89.	An example of a psychede	-		
	a) DNA	b) LSD	c) DDT	d) TNT
90.	Which are insecticides?			
	a) Baygon	b) Savine	c) Methoxy chlor	d) All of these
91.	The drugs used to get relie	=		
	a) Antipyretics	b) Analgesics	c) Antibiotics	d) Antiseptics
92.	Which of the following is u	-		
	a) Phenol	b) Benzaldehyde	c) Benzalamine	d) Malic anhydride
93.	Which one is acidic dye?			
	a) Methyl orange	b) Methyl red	c) Phenolphthalein	d) All of these
94.	4-chloro-3,5-dimethyl phe	enol is called		
	a) Chloramphenicol	b) Paracetamol	c) Barbital	d) Dettol
95.	A space rocket is propelle	d by:		
	a) An automobilic engine			
	b) Nuclear engine			
	c) Steam engine			
	d) Mixture of fuel and oxid			
96.	The following compound i	is used as:		
	O II			
	$O-C-CH_3$			
	СООН			
	a) An anti-inflammatory c	compound		
C	b) Analgesic			
	c) Hypnotic			
~	d) Antiseptic			
97.	1			
	a) Chlorobenzene	b) Chloroxylenol	c) Terpineol	d) Both (b) and (c)
98.		veen the specific <i>I<sub>s</sub></i> impulse	and the critical temperatu	re $T_c$ attained in a rocket
	blast?			
	a) $I_s \ge T_c$	b) $I_s$ and $T_c^2$	c) $I_s \geq T_c^{1/2}$	d) $I_s \ge 1/T_c$
99.	The drug used for prevent	tion of heart attacks is		

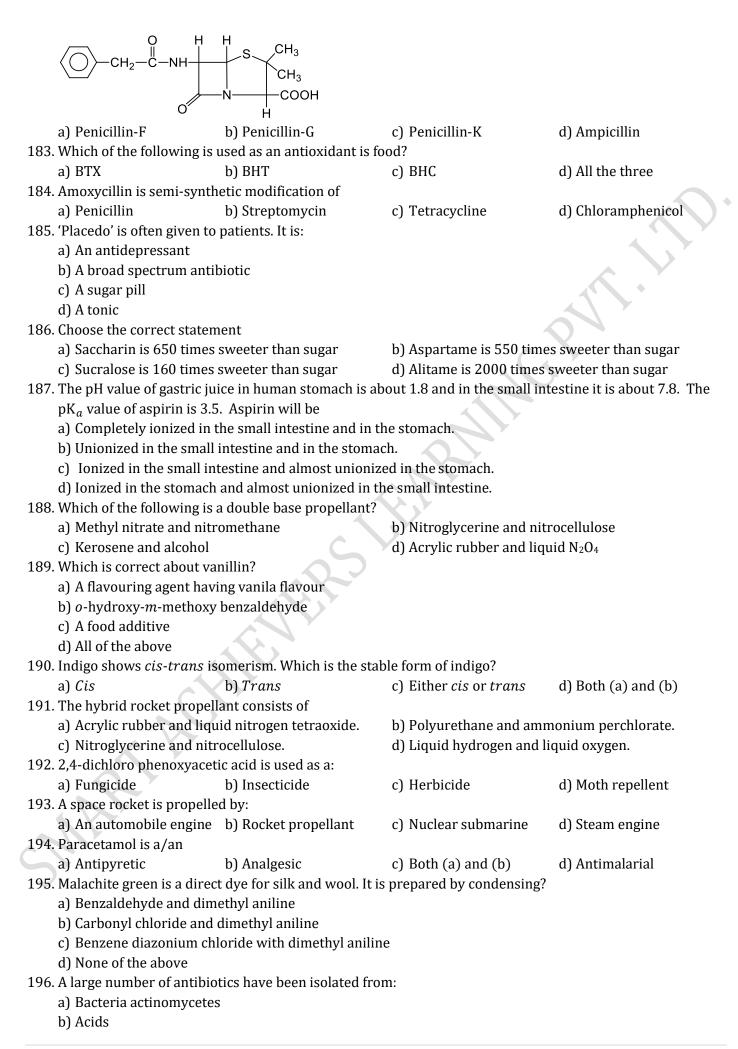
a) Aspirin	b) Valium	c) Chloramphenicol	d) Cephalsoprin
100. Which one of the followin	• • • •		
a) Chlorpheninamine	b) Equanil	c) Naproxen	d) Tetracycline
101. Which of the following is	=		
a) Pentaerythritol monos		b) Sodium stearyl sulphat	
c) Trimethyl stearyl amm		d) Ethoxylated nonyphen	ol
102. Trade name of aspartame			
a) Alitame	b) Saccharin	c) Sucralose	d) Nutra sweet
103. Which of the following is	dye?		
a) Methyl orange	b) Orange I	c) Aniline yellow	d) All of these
104. Which of the following is	molecular disease?		
a) Allergy	b) Cancer	c) German measeles	d) Sickel-cell anaemia
105. 2-acetoxy benzoic acid is	used as an		
a) Antimalarial	b) Antidepressant	c) Antiseptic	d) Antipyretic
106. Which of the following gro	oups is not an auxochrome	?	
a) $-N(CH_3)_2$	b) —H	c) —0CH <sub>3</sub>	$d$ $\sum -N$
- · • • -	2	c) 00113	
107. Arsenic drugs are mainly			
a) Jaundice	b) Typhoid	c) Syphilis	d) Cholera
108. Which of the following set			
a) $HNO_3$ , $H_2/Pd$ , ( $CH_3CO$ )	=	b) $H_2SO_4$ , $H_2/Pd$ , (CH <sub>3</sub> CO	)20
c) $C_6H_5N_2Cl, SnCl_2/HCl, ($	$CH_3CO)_2O$	d) $Br_2/H_2O$ , $Zn/HCl$ , ( $CH_3$	<sub>2</sub> CO) <sub>2</sub> O
109. Which one is a broad spec	ctrum antibiotic?		
a) Chloramphenicol	b) Plasmoquin	c) Xylocane	d) Antiseptic
110. Which of the following is	not used as an antacid?		
a) Magnesium hydroxide		b) Sodium carbonate	
c) Sodium bicarbonate	Ċ	d) Aluminium phosphate	
111. Which of the following sta	atement is not true about th	<i>,</i>	
a) It causes addiction		b) It is a non-hypnotic dru	1σ
c) It is tranquillizer		d) It is used insleeping pil	-
	n of	u) it is used inside ping pi	115
112. Heroin is acetyl derivative		a) Nicotino	d) Manuhina
a) Caffeine	b) Cocaine	c) Nicotine	d) Morphine
113. An antibiotic contains nit			
a) Pencillin	b) Streptomycin	c) Tetracyclin	d) Chloramphenicol
114. Morphine on alkylation a		-	
a) Heroin, codeine	b) Heroine, meperidine	c) Codeine, heroin	d) Meperidine, heroin
115. A diazonium salt reacts w		=	
a) Diazotisation	b) Condensation	c) Coupling	d) Reduction
116. Which of the following is			
a) DDT	b) Methoxychlor	c) Parathion	d) BHC
117. A composite solid propell			
a) Polyurethane or polyb	utadiene and ammonium p	erchlorate	
b) Nitroglycerine and nitr	ocellulose		
$\sim$ c) Hydrazine and N <sub>2</sub> O <sub>4</sub>			
d) Kerosene and liquid ox	vgen		
118. Which of the following is			
a) Linalool	b) Disparlure	c) BHA	d) Alifame
119. Which of the following is		,	· · · ·
a) Indigo	b) Alizarin	c) Picric acid	d) Crystal violet
120. Chloroamphenicol is an:	<i>5 j</i> 1 11 2 41 111	cj i ici ici acia	
a) Antifertility drug	b) Antihistaminic	c) Antiseptic and	d) Antibiotic broad
aj mulei unty ul ug		cj milisepul allu	uj Allubiolit biodu

		disinfectant	spectrum
121. In the following sets of		contains only medicinal c	compounds is
a) Alizarin, phenacetin,	-		
b) Aspirin, gention viol			
c) Boric acid, chloramp	· 1		
d) 9-oxodecanoic acid,	-		
	l₃ DOH		
$\begin{bmatrix} \bigcirc \end{bmatrix}$			
The compound 💛	is used as		
a) Antiseptic	b) Antibiotic	c) Analgesic	d) Pesticide
123. Which of the following	structures represents a col	ourless substance?	
a) $C_6H_5-N=N-C_6H_5$			
a)			
b) $C_6H_5$ —N=N— $C_6H_5$			
	TI		
c) $C_6H_5$ —NH—NH— $C_6$	,n <sub>5</sub>		
d) None of the above 124. Paracetamol is		(	
		h) Dhonyi anligutato	5
a) Methyl salicylate	anal	b) Phenyl salicylate	
c) N-acetyl <i>p</i> -amino ph		d) Acetyl salicylic acid	
125. Which of the following		a) Lindana	d) Contion violat
a) Iodoform	b) Dettol	c) Lindane	d) Gention violet
126. Select the detergent tha	it is used to prepare cosme		
a) DDBS		b) Polyethylene glycol	
c) Cetyltrimethylammo		d) LAS	
127. Which one is disperse d			
a) Congo red	b) Alizarin	c) Celliton	d) None of these
128. Heroin is a derivative o			
a) Cocaine	b) Morphine	c) Caffeine	d) Nicotine
129. Which of the following			
a) C <sub>17</sub> H <sub>35</sub> COOK	b) C <sub>17</sub> H <sub>35</sub> COOH	c) C <sub>15</sub> H <sub>31</sub> COOH	d) (C <sub>17</sub> H <sub>35</sub> COO) <sub>2</sub> Ca
130. The drug, effective for t			
a) Paracetamol	b) Luminal	c) Chloromycetin	d) Novalgin
131. Which of the following		gerant?	
a) Carbon tetrachloride			
b) Acetone			
c) Carbon tetrafluoride			
d) Dichlorodifluoromet			
132. Tranquilisers are also k			,
a) Psychosomatic drug		b) Psychotherapeutic	drugs
c) Psychosystolic drugs	5	d) None of the above	
133. Soaps are classified as			
a) Ether	b) Salts of fatty acids	c) Carbohydrates	d) None of these
134. Penicillin is a:			
a) Hormone	b) Antibiotic	c) Antipyretic	d) Vitamin
135. Antiseptic chloroxylend			
a) 4-chloro-3, 5–dimeth	• •	b) 3-chloro-4, 5-dimet	• •
c) 4-chloro-2, 5-dimeth	yl phenol	d) 5-chloro-3, 4-dimet	hyl phenol
136. Chloramphenicol is			<b>,</b> ,
a) Narrow spectrum an		b) Broad spectrum and	-
c) Broad spectrum anti	biotic	d) Broad spectrum ant	tibacterial

137. Alizarin belongs to the	class of		
a) Vat dyes	b) Mordant dyes	c) Basic dyes	d) Reactive dyes
138. Morphine an alkaloid i	S:		
a) Anaesthetic	b) Analgesic	c) Antiseptic	d) Antibiotic
139. Identify the wrong stat	tement regarding alizarin:		
a) Alizarin was extract	ed from the roots of the made	der plant	
b) Its chemical name is	s 1, 2-dihydroxy anthraquino	ne	
-	by using mordants like alumi		
· ·	luble in alkalies and the solut	ion imparts red colour to f	abrics
140. Which of these is a hyp			
a) Metaldehyde	b) Acetaldehyde	c) Paraldehyde	d) None of these
141. The drug used as an an	-		
a) Luminol	b) Tofranil	c) Mescaline	d) Sulphadiazine
	wing is employed as a tranqui		
a) Promethazine	b) Valium	c) Naproxen	d) Mifeprestone
143. The drug, which is not			
a) Ibuprofen	b) Veronal	c) Luminal	d) Seconal
144. 2-acetoxybenzoic acid		a) Anticontic	D Autimustic
a) Antimalarial 145. OH	b) Antidepressant	c) Antiseptic	d) Antipyretic
CH <sub>3</sub> CH <sub>3</sub> COCl, Py	$\rightarrow X \frac{\text{KMnO}_4}{\longrightarrow} Y$		
_	s medicine. Which of the follo		-
c) It has anti-blood clo	vell as antipyretic properties	d) It suppresses the gast	
	act both as an antiseptic and		inc anomanes
a) Aspirin	b) Chloroxylenol	c) Bithional	d) Phenol
<i>,</i> .	duce anxiety and brings abou	•	uj i nenoi
a) Tranquilliser	b) Diuretic	c) Analgesic	d) Antihistamine
148. A drug that is antipyre		ej magobie	
a) Chloropromazine hy	J	b) <i>para</i> -acetamidophen	ol
c) Chloroquin		d) Penicillin	
· ·	wing types of drugs reduces f	ever?	
a) Tranquiliser	b) Antibiotic	c) Antipyretic	d) Analgesic
150. Thrust imparted to the	rocket is governed by the:		
a) Third law of thermo	odynamics		
b) Gravitational law			
c) Newton's third law			
d) None of the above			
151. Which is correct about	saccharin?		
a) It is $\bigwedge$	νH		
	111		
$\sim \sim $			
b) It is 600 times swee	ter than sugar		
c) It is used as sweeter	_		
d) All of the above			
152. Chemically aspirin is k	nown as		

a) Salicylic acid	agid	b) Salicylaldehyde	
c) 2-acetoxybenzoic		d) Phenyl salicylate	
153. Benzalkonium chlor			
a) Cationic surfactar	-		
	t and soluble in most of organ		
-	it and insoluble in most of or	ganic solvents.	
d) Cationic surfactar			
-	the good artificial sweetener	s whose use is limited to col	d foods and soft drinks
because			
a) It has very low bo		b) It gets dissociated at	
c) It is sweetener at		d) It is insoluble at high	ner temperatures
155. As ester used as med			
a) Ethyl acetate	b) Methyl acetate	c) Methyl salicylate	d) Ethyl benzoate
	ng does not behave as a surfa		
a) Soap	b) Detergent	c) Phospholipid	d) Triglycerides
157. Which one is commu			
a) Scurvy	b) Diabetes	c) Beri-beri	d) Cholera
158. Which of the followi			
a) Nicotine	b) Piperine	c) Codeine	d) All of these
	e detected in human being w		
a) Cold	b) Influenza	c) Small pox	d) Yellow fever
	erilization of water in water s	supply system of cities?	
a) Chlorine			
b) Sulphurdioxide			
c) Potassium perma	nganate		
d) DDT	Ć	$\mathbf{V}$	
161. The name of the org	-		
a) Dichloro dipheny			
b) Dichloro dipheny			
c) Diphenyl dichloro			
d) Dichloro dipheny			
	ellant was used in rocket SLV	-3 which was fired by India	?
a) Solid propellant			
	cazine + Liquid $N_2O_4$		
	methyl hydrazine + Liquid N	l <sub>2</sub> 0 <sub>4</sub>	
d) Liquid oxygen			
		ig that both, amide and este	r bonds are hydrolysed in the
stomach, the amino			
CH₂CHCO	$H_2N - CHCH_2COOH$	I c) Both (a) and (b)	d) None of these
	ן		
NH <sub>2</sub>	СООН		
	d to fix a dye to the fabric is k		
a) Mordant	b) Azeotrope	c) Bleaching agents	d) Lake
	an act both as antiseptic and		
a) Aspirin	b) Chloroxylenol	c) Bithional	d) Phenol
166. Pick out the stateme			
a) Tetrazine is harm			
b) Alitame is an artif			
c) BHT is an antioxid			
	hate is a cationic detergent.		
167. Which of the followi	ng is used as a local anaesthe	tic agent?	

a) Diazepam	b) Procaine	c) Mescaline	d) Seconal
168. Which of the follow	ving could act as a propellan	t for rockets?	
<ul> <li>a) Liquid hydroger</li> </ul>	n + liquid nitrogen	b) Liquid oxygen +liq	uid argon
<li>c) Liquid hydroger</li>	n + liquid oxygen	d) Liquid nitrogen + l	iquid oxygen
169. Which set has diffe	rent class of compounds?		
a) Tranquillizers :	equanil, heroin, valium		
b) Antiseptic : bith	ional, dettol, boric acid		
c) Analgesics : nap	roxen, morphine, aspirin		
d) Bactericidal : Pe	nicillin, aminoglycosides, of	loxacin	
-	which is used to preserve bre		
a) Sodium benzoat	=	b) Sodium metabisulp	hite
c) Sodiumpropiona		d) Sodium sorbate	
,	ving is known as invert dete	•	
a) Pentaerythritol	-	b) Sodium stearyl sult	phate
	ammonium bromide	d) Ethoxylated non ph	
172. Phenacetin is used		uj Etnoxylateu non pr	
a) Antipyretic	b) Antiseptic	c) Antimalarial	d) Disinfectant
173. Select the incorrec	, i	CJ Antinialariai	u) Disinfectant
	to control depression and hy	montoncion	
<i>,</i> .		-	
	a synthetic steroid used as "		
		tic while its 1.0 per cent solut	lion is a disinfectant
, ,	lls the organism in the body		
	ving represents a biliquid pr	opellant?	
a) Nitroglycerine +			
b) $N_2O_4$ + Acrylic r		$\langle \rangle$	
	netrical dimethyl hydrazene		
d) None of the above			
175. Barbituric acid and	l its derivatives are well kno	wn	
a) Antipyretics	b) Analgesics	c) Antiseptics	d) Traquillizers
176. Which of the follow	ving can possibly be used as	analgesis without causing ad	ldiction and any modification?
a) Morphine		b) N-acetylparaamino	phenol
c) Diazepam		d) Tetrahydrocatenol	
177. The rose odour fro	m an ester is formed by the	action of HCOOH on:	
a) Pine oil	b) Olive oil	c) Geraniol	d) Turpentine oil
178. Which one is a bac	terial disease?		
a) Amoebic dysent	ery b) Gonorrhoea	c) Cholera	d) Mumps
179. Further growth of	cancerous cells in the body i	s arrested by	
a) Physiotherapy	b) Chemotherapy	c) Elelctrotherapy	d) Psychotherpy
	ving is a example of non-bio	, .,	
		b) CH <sub>3</sub> -(CH <sub>2</sub> ) <sub>9</sub> CH-	) SO <sub>3</sub> Na
		с́н <sub>3</sub> —	
$\langle CH_3 \rangle CI$	H <sub>3</sub>		
a) $CH_3 - (CH_2)_{11} - \langle CH_3 \rangle CH_3 - CH_3 \rangle CH_3 - CH_3 - CH_3 - CHCH_2 - CHCH_$	, H—∕ ◯ )— SO₃Na	d) $CH_3(CH_2)_{10}CH_2OS$	0 <sub>3</sub> Na
· · · · ·	rmicide, gammexane is a for	mulation for:	
a) DDT	<u> </u>		
b) Benzene hexach	loride		
c) Hexachlorobenz			
d) Chloral			
182. The structure give	1 helow is known as		
	1 5010 W 15 MIO WII 85		



c) Alkanals		
d) Bacteria rhizobium		
197. Which of the following is not an analgesic?		
a) Ibuprofen	b) Dichlofenac sodium	
c) Naproxen	d) Ofloxacin	
198. Veronal, a barbiturate drug is used as:	.,	
a) Anaesthetic b) Sedative	c) Antiseptic	d) None of these
199. Amphetamine is used as	j i i r	.,
a) Anaesthetic b) Antidepressant	c) Antimalarial	d) Analgesic
200. Which of the following is an aritificial edible colour		
a) Saffron b) Carotene	c) Tetrazine	d) Melamine
201. Which of the following represents a synthetic deter	•	
a) C <sub>15</sub> H <sub>31</sub> COOK	b) $CH_3(CH_2)_6COONa$	
	d) All of the above	
c) $C_{12} H_{25} - \langle \bigcirc \rangle - SO_3 Na$	a) fin of the above	
202. Which of the following is not bacteriostatic antibiot	tic?	
a) Erythromycin b) Tetracycline	c) Chloramphenicol	d) Penicillin
203. Chemically heroin is	ej amorampilemeet	
a) Morphine diacetate	b) Morphine monoaceta	te
c) Morphine dibenzoate	d) Morphine monobenzo	
204. Interferon is:	uj norphile nonobeliza	succ
a) Tonic b) Virus	c) Carbohydrate	d) Ore of iron
205. Barbituric acid is used as	ej da bonyarace	
a) An antipyretic b) An antiseptic	c) An antibiotic	d) A tranquiliser
206. Sulphaguanidine is used for:	c) mi untibiotic	u) n tranquinser
a) Dysentery b) Urinary infections	c) Antiseptic	d) Antipyretic
207. Sulpha drugs are derivatives of	ej miliseptie	ujmupjiede
a) Benzenesulphonic acid	b) Sulphanilic acid	
c) Sulphanilamide	d) <i>p</i> -aminobenzoic acid	
208. A drug that is antipyretic as well as analgesic is	uj p anniobenzoie aciu	
a) Chloroquine	b) Penicillin	
c) Paracetamol	d) Chloropromazine hyd	Irochloride
209. Measles is a disease which belongs to the category	, <u>,</u> ,	
a) Bacterial disease b) Viral disease	c) Veneral disease	d) Protozoan disease
210. For the preparation of a detergent " $A$ " (given below		-
RCH=CH <sub>2</sub>	)	
1. $$ HF,Friedel–Craft''s		
$\underset{\text{II.}}{\overset{\text{H}_2\text{SO}_4/\text{SO}_3}{\longrightarrow}}$		
III. $\xrightarrow{\text{NaOH}}$ RCH- $\langle \bigcirc \rangle$ -SO <sub>3</sub> Na <sup>+</sup>		
$CH_3$ (4)		
(A)		
These steps should be in sequence	<b>``````</b>	N
Ja) I, II, III         b) II, I, III	c) II, III, I	d) I, III, II
211. Which of the following is used as an oxidiser in rock		
a) Kerosene b) Nitric acid	c) Liquid oxygen	d) Liquid hydrogen
212. $H_2O_2$ used in rocket has the concentration	2004	D 000/
a) 50% b) 70%	c) 30%	d) 90%
213. Aspirin is obtained by the reaction of $CH_3COCI$ with	1:	
a) Phenol		
b) Benzoic acid		

c) Salicylic acid			
d) Benzaldehyde			
214. Which of the following of			
a) Ampicillin	b) Penicillin G	c) Penicillin K	d) Tetracycline
215. The detergent which is u	-		
a) Sodium lauryl sulpha		b) Cetyltrimethyl ammo	
c) Lauryl alcohol ethoxy		d) Sodium-2-dodecylber	nzenesulphonate
216. Antiseptic are different			
	ibit the growth and disinfed	_	
	gainst microorganism while		
	nly over skin while disinfec	-	
	ver living tissues while disin		ver living tissues
217. A drug effective in the tr	=		
a) Streptomycin	b) Chloramphenicol	c) Penicillin	d) Sulphaguanidine
218. The correct structure of	the drug paracetamol is		
а) HO— ( ( ) )—	-CONH <sub>2</sub>	b) 10	
			5
	-CONH <sub>2</sub>		-COCH <sub>3</sub>
219. Phenacetin is used as			
a) Antipyretics	b) Antiseptics	c) Analgesic	d) Antimalarials
220. Acetoxybenzoic acid is	b) millisepties	c) margeste	uj minimalariais
a) Antiseptic	b) Aspirin	c) Antibiotic	d) Mordant dye
221. Which one among the fo			aj Mordant aye
a) Ibuprofen	b) Naproxen	c) Aspirin	d) Valium
222. Streptomycin is effective		cj nopini	
a) Tuberculosis	b) Malaria	c) Typhoid	d) Cholera
223. The drug used to bring of		cj ryphola	
a) Analgesic	b) Antibiotic	c) Antipyretic	d) Sulpha drugs
224. A certain dye was prepa		,	, 1 0
a) Malachite green	b) Congo red	c) Indigo	d) turmeric
225. Which of these is not us	, ,	, 0	a) turmerie
a) Liquid He	b) Liquid hydrogen	c) Kerosene	d) Liquid hydrazine
226. Penicillin is a/an	b) Elquid Hydrogen	ej herosene	a) Equila ny arazine
a) Hormone	b) Antibiotic	c) Antipyretic	d) Analgesic
227. Which of the following i	-	, <b>.</b> .	aj maigeste
a) $H_2(l)$	b) $O_2(l)$	c) $N_2H_4(l)$	d) All of these
228. The reagent (s) used in			
a) SOCl <sub>2</sub> , pyridine	b) $(CH_3CO)_2O, H$	c) CH <sub>3</sub> CO <sub>2</sub> H, HCl	d) $CH_3Cl$ , $AlCl_3$
229. To which class of dyes d		, , ,	
a) Azo dyes	rest proto-production belong	<b>J</b> .	
b) Nitro dyes			
c) Triphenyl methane d	ves		
d) Phthalein dyes	,		
230. Which is the wrong stat	ement with regards to Indig	20?	

230. Which is the wrong statement with regards to Indigo?

a) Indigo was extracted in India from plants of the 'Indigo ferra' group

b) The chemical structure of Indigo was determined by Baeyer, a German chemist who also synthesized it

c) Indigo is a dark blue solid soluble in water giving a blue solution

d) Indigo is fixed to fabr	ics by the vat process		
231. Luminal, a barbiturate d			
a) Antihistamine	b) Sedative	c) Antiseptic	d) Antimalarial
232. Which of the following r	epresents an analgesic?		
a) Equanil	b) Quinine	c) Novalgin	d) All of these
233. Which of the following i	s an anionic detergent?		
a) $CH_3(CH_2)_{16}CH_2OSO_3$	Na	b) $CH_3(CH_2)_{16} + (CH_3)_3$	Cl <sup>-</sup>
c) CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> COO(CH <sub>2</sub>	$CH_2O)_nCH_2CH_2OH$	d) C <sub>6</sub> H <sub>5</sub> SO <sub>3</sub> Na	
234. Aspirin, an antipyretic d	rug is chemically:		
a) Methyl salicylate			
b) Ethyl salicylate			
c) Acetyl salicylic acid			
d) <i>o</i> -hydroxy benzoic ac			
235. The group commonly pr			d) DC U CO No
a) HCOONa 236. Oil of winter green and s	b) RONa	c) RCOONa	d) $RC_6H_4SO_3Na$
a) Salicylic acid	b) Lactic acid	c) Acetic acid	d) Sulphanilic acid
237. Compound A given belo		c) Accile acid	uj sulphannie aciu
OCOCH <sub>3</sub>	VV 15		
Соон			
$\left( \right) \right)$			
Ă	4		
a) Antiseptic	b) Antibiotic	c) Analgesic	d) Pesticide
238. An anaesthetic is	, C		
a) Procaine	b) Chloramphenicol	c) <i>n</i> -hexyl resorcinol	d) Cibazol
239. The functional groups p	resent in 'salol' are		
a) — $NH_2$ and — $OR$		b) — OH and — CO <i>R</i>	
c) — $NH_2$ and — COOH		d) — OH and — COO <i>R</i>	
240. An example of a psycheo	-		
a) DNA	b) LSD	c) DDT	d) TNT
241. Anti-allergy drugs are			
a) Antimicrobials	b) Antihistamines	c) Antivirals	d) Antifungals
242. Pencillin was first discov	•		
a) Alexander Fleming	b) Tence and Salke	c) S.A. Waksman	d) Louis Pasteur
243. Tincture of iodine is		b) Solution of L in aque	
<ul><li>a) Aqueous solution of I</li><li>c) Alcoholic solution of I</li></ul>		<ul> <li>b) Solution of I<sub>2</sub> in aque</li> <li>d) Aqueous solution of I</li> </ul>	
244. Which detergent can cau		u) Aqueous solution of	
			A
a) $CH_3CH(C_4H_9) - CH_2CH_2CH_2CH_2CH_2CH_2CH_2CH_2CH_2CH_2$	$N_2 \cup I_1 \cup U_4 \cup U_9 \cup U_1 \cup U_2 \cup U_3$	b) CH <sub>2</sub> (CH <sub>2</sub> ) <sub>11</sub> -	∕—SO₃Na
c)		d) Detergents are alway	rs pollution free
		aj Detergents are arway	5 Pollution II CC
245. Which among the follow		a) Enuthrances	d) Totrografino
a) Penicillin 246. Which of the following s	b) Oxytocin	c) Erythromycin	d) Tetracycline
_	in be used as antiseptic at l	ow concentration	
b) Sulphadiazine is a syr	-		
c) Ampicillin is natural a			
-, <sub>F</sub> 10 material			

d) Aspirin is analgesic and antipyretic both

Page | 16

						СН	EM	ISTRY							
						: ANS	W	ER K	EY:						
1)	а	2)	b	3)	b	4)	d	185)	С	186)	d	187)	С	188)	b
5)	b	6)	b	7)	а	8)	a	189)	d	190)	b	191)	d	192)	С
9)	d	10)	d	11)	b	12)	С	-	b	194)	a	195)	а	196)	а
13)	С	14)	а	15)	С	16)	a	197)	d	198)	b	199)	b	200)	С
17)	b	18)	d	19)	а	20)	a	,	С	202)	d	203)	а	204)	b
21)	C	22)	d	23)	C	24)		205)	d	206)	а	207)	C	208)	С
25) 20)	d L	26) 20)	b	27)	b	28)		209)	b	210)	a L	211)	b L	212)	d
29) 22)	b	30) 24)	a d	31) 25)	d	32) 26)		213)	C	214) 219)	b հ	-	b	216)	d h
33) 37)	a b	34) 38)	d d	35) 39)	a c	36) 40)	b	217) 221)	c d	218) 222)	b a	219) 223)	a	220) 224)	b c
37) 41)	C	30) 42)	u C	39) 43)	с b	40) 44)		221)	u a	222)	a b	223)	Ċ d	224) 228)	c b
45)	b	46)	d	43) 47)	b	48)		229)	d	230)	C	231)	u b	232)	c
49)	b	50)	b	51)	c	52)	b	-	a	234)	c	235)	d	236)	a
53)	b	54)	c	55)	a	52) 56)	b	-	c	238)	a	239)	d	230) 240)	b
57)	c	58)	a	59)	a	60)	c	-	b	242)	a	243)	C	244)	a
61)	a	62)	b	63)	b	64)	a		b	246)	C	_10)	•	)	-
65)	С	66)	b	67)	b	68)	b	- ,			-				
69)	b	70)	d	71)	b	72)	а	1	X						
73)	С	74)	b	75)	С	76)	С								
77)	а	78)	С	79)	а	80)	a	$\mathbf{N}$							
81)	а	82)	С	83)	b	84)	a	Y							
85)	С	86)	С	87)	b	88)	С								
89)	b	90)	d	91)	b	92)	a								
93)	а	94)	d	95)	d	96)	b								
97)	b	98)	С	99)	а	100)	b								
101)	С	102)	d	103)	d	104)	b								
105)	d	106)	d	107)	С	108)	a								
109)	a	110)	b	111)	b	112)	d								
113)	d	114)	C	115)	С	116)	С								
117)	а	118)	b	119)	а	120)	d								
121)	С	122)	C	123)	С	124)	C								
125) 120)	C C	126) 120)	C	127) 121)	C d	128) 122)	b b								
129) 133)	a h	130) 134)	C h	131) 135)	d 2	132) 136)	b								
133) 137)	b b	134) 138)	b b	135) 139)	a d	136) 140)	C C								
137) 141)	b	130)	b b	139J 143)	u a	140) 144)	c d								
141)	d	142)	d	143) 147)	a a	144) 148)	u b								
149)	c	150)	u C	151)	d	140) 152)	c								
153)	a	150)	b	151)	c	152) 156)	d								
157)	d	154)	d	159)	d	160)	b								
161)	b	162)	a	163)	c	160) 164)	a								
165)	d	166)	d	165) 167)	b	161)	c c								
169)	a	170)	c c	171)	c	100) 172)	a								
173)	d	174)	c	175)	d	176)	b								
177)	c	178)	c	179)	b	180)	c								
181)	b	182)	b	183)	b	180) 184)	a								
	~	- <b></b> j	~	1005			~	I							

#### CHEMISTRY

#### : HINTS AND SOLUTIONS :

#### 3 **(b)**

Basic dyes contain  $NH_2$  or— $NR_2$  group as colour bearing groups or colour enhancing groups. They are generally used for wool, cotton, leather, paper, polyester, nylon, etc., *e*. g., aniline yellow, crysodine G, Butter yellow, malachite green, etc.

4 **(d)** 

Rest all are antibiotic.

5 **(b)** 

Fluorescein is obtained by the reaction of phthalic anhydride and resorcinol.

6 **(b)** 

Erythromycin is a bacteriostatic (inhibits the growth of organisms).

#### 7 **(a)**

Methyl salicylate also known as oil of winter green is used as medicine iodex in treatment of rheumatic pains and remedy for aches, sprains and bruises.

#### 8 **(a)**

Tranquilizers reduce anxiety and tension. They are also called psychototropic drugs. These are of two types: (a) Sedative: The drugs used for violent and mentally agitated patients e.g., equanil and diazepam. (b) Antidepressent: The drugs are used to patients who are highly depressed and lose self confidence e.g., tofranil, vitalin, amphetamines, etc.

#### 9 **(d)**

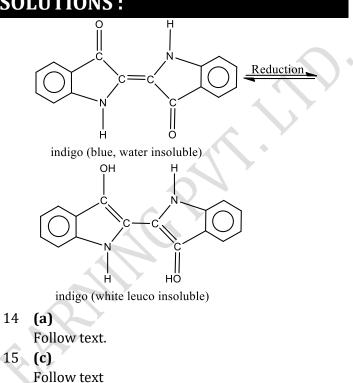
Methyl orange is yellow in alkaline medium and red in acid medium.

10 **(d)** 

Eosin is red dye.

#### 11 **(b)**

Vat dyes are soluble in water and cannot directly applied. It is reduced to soluble colourless leuco form by an alkaline reducing agent. *E.g.*,



#### 16 **(a)**

These drugs produce sleep and are habit forming. Common examples of hypnotic drugs are luminal and saconal.

#### 17 **(b)**

Antiseptics drugs cause destruction of microorganisms, which produce, septic diseases, *e.g.*, dettol, savlon, acriflavin, boric acid, phenol, iodoform, KMnO<sub>4</sub> and some dyes such as chloramines-T, methylene blue.

#### 19 **(a)**

An antibiotic for cure of TB.

#### 22 **(d)**

Bithional is added to soap to impart antiseptic properties. It is reduces odours produced by bacterial decomposition of organic matter on the skin.

#### 23 **(c)**

cis isomer of  $Pt(NH_3)_2Cl_2$  is used as an anticancer drug.

#### 24 **(d)**

Saccharin is 110 times sweeter than sugar. Aspartame is 180 times sweeter than sugar Sucralose is 650 times sweeter than sugar

25 **(d)** 

A propellant is a combination of an oxidizer and a fuel. Among the given only ammonium perchlorate is used as a fuel in rocket propellant.

#### 27 **(b)**

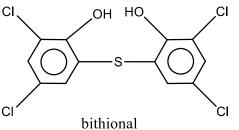
Group (-COO<sup>-</sup>) at one end and on other end, it has Na<sup>+</sup> ions, thus cationic micelle is formed. Sodium acetate forms cationic micelles above a certain concentration. In the molecule of detergents and soap, the negative ions aggregate to form a micelle of colloidal size. In polar medium (like water), the negative ion has a long hydrocarbon chain and a polar.

#### 28 **(c)**

It is a fact.

#### 30 **(a)**

Bithional is disinfectant which is generally added to medicated soap to reduce the odour produced by bacterial decomposition of organic matter on the skin.



- 31 **(d)** 
  - \_\_\_\_do\_\_\_\_
- 32 **(c)**

Chloramphenicol is broad spectrum drug, used in treatment of typhoid, dysentery, acute fever, meningitis pneumonia and certain forms of urine infection.

#### 33 **(a)**

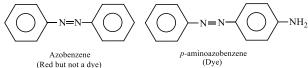
Hybrid propellants these are the propellants which consists of solid fuel and a liquid oxidizer. For example, liquid N<sub>2</sub>O<sub>4</sub> (liquid oxidizer) and acrylic rubber (solid fuel).

#### 34 **(d)**

A dye molecule is made up of two different parts (i) Chromophore (Greek : *chroma* = colour, *phoros* = bearing) and (ii) Auxochromes (Greek : *auxo* = increase, *chroma* = colour). The groups which produce colour in a compound, i.e.,

chromophores are usual unsaturated groups like nitro, nitroso, azo, azoxy, carbonyl and olefinic bonds. Auxochromes are usually acidic / basic functional groups like -OH, -COOH,  $-SO_3H$ , -NH<sub>2</sub>,-NHR,  $-NR_2$ .

A compound containing only a chromophore may be a coloured material but not a dye, e.g., azobenzene is red coloured but not a dye whereas *p*-aminoazobenzene (aniline yellow) is a dye.



#### 35 **(a)**

Lindane or gammexane is  $\gamma$ -isomer of BHC.

#### 36 **(b)**

It was MIC or methyl isocyanate.

#### 38 **(d)**

Dettol (antiseptic) is a mixture of 4.8% chloroxylenol +9.9% terpineol and absolute alcohol.

#### 39 **(c)**

It is a fact.

#### 40 **(c)**

It is antibiotic — a chemical substance produced or derived from living cells which is capable of inhibiting the life processes or even destroying microorganisms.

#### 41 **(c)**

It is used as antithistamine drugs.

#### 44 **(a)**

The given structure is of histamine that acts as a neurotransmitter and vasodilator.

#### 45 **(b)**

Every surfactant contains two parts viz a hydrophobic part and a hydrophilic part. The compound  $CH_3(CH_2)_{14}CH_2NH_2$  contains only hydrophobic part but no hydrophilic part, hence it is not a surfactant

#### 46 **(d)**

Sulpha drugs (antibacterial and non-antibiotic) are group of drugs which are derivative of sulphanilamide.

#### 47 **(b)**

Follow text

#### 48 **(a)**

Antiseptic drugs cause destruction of microorganisms that produce septic diseases, e.g., dettol, savlon, acriflavin, boric acid, phenol, iodoform, KMnO<sub>4</sub>and some dyes such as chloramine-T, methylene blue, genatian violet.

#### 49 **(b)**

Acetyl salicylic acid is also called acetoxy benzoic acid (aspirin).

#### 51 **(c)**

Chloramphenicol is broad spectrum drug, used in the treatment of typhoid, dysentery, acute fever, meningitis, pneumonia and certain forms of urine infections.

#### 53 **(b)**

Fluorescein is an example of phthalein dye.

#### 54 **(c)**

Tranquillizers reduce anxiety and tension. They are also called psychototropic drugs. These are of two types: (a) Sedative: The drugs used for violent and mentally agitated patients e.g., equanil and diazepam. (b) Antidepressant: The drugs are used to patients who are highly depressed and lose self confidence e.g., tofranil, vitalin, amphetamines, etc.

#### 56 **(b)**

It is antimalarial drug.

#### 57 **(c)**

Biliquid propellant: A double base propellant is a high strength, high modulus gel of cellulose nitrate (gun cotton) in glyceryl trinitrate or a similar solvent.

#### 60 **(c)**

In baby talcum powders, boric acid is used as antiseptic

#### 62 **(b)**

The safest and the most common alternative of sugar is aspartame.

#### 63 **(b)**

Direct dyes stick to the fibre through hydrogen bonding. They belong to the class of azo dyes. They are used to dye the fabric directly by placing it in hot aqueous solution of the dye, e.g., Martius yellow, congo red, etc.

#### 64 **(a)**

Salol is phenyl salicylate; used as antiseptic.

#### 65 **(c)**

Follow text.

#### 66 **(b)**

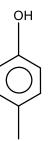
Vat dyes are insoluble compounds which upon reduction give soluble (leuco form) product. The product may be either coloured or colourless and have affinity for specific fabrics, e.g., indigo.

#### 68 **(b)**

Follow text.

#### 70 **(d)**

The structure of an important antipyretic, paracetamol is



#### NHCOCH3

So, *p*-amino phenol gives paracetamol on acetylation.

#### 71 **(b)**

Dyes are the natural or synthetic chemicals used to impart colour to fabrics, plastics, paper, etc. including food items for their pleasant appearance. Alizarin (orange-red) is extracted from the root of madder plant; also synthesised now-a-days.

#### 73 **(c)**

It  $(C_{17}H_{21}O_4N)$  is an alkaloid, a local anaesthetic but dangerous habit forming drug.

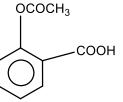
#### 75 **(c)**

Rest all are antipyretic. Barbituric acid is tranquillizer.

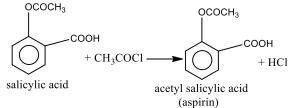
#### 76 **(c)**

Ingrain or developed dyes are those which are synthesised directly on the fabric, *e*.g., azo dyes. Ingrain dyeing is particularly suitable for cotton fabric.

#### 77 **(a)**



Which is acetylated product of salicylic acid(*o*-hydroxy benzoic acid).



78 **(c)** 

Ampicillin is a synthetic antibiotic.

79 **(a)** 

The process is called lake.

#### 80 **(a)**

Cationic detergents are quaternary ammonium salts, containing long chain alkyl groups and possess germicidal properties

82 **(c)** 

It is an insecticide.

#### 84 **(a)**

Liquid propellants: These include fuels such as kerosene, alcohol, hydrazine or liquid hydrocarbon mixed with an oxidiser such as liquid oxygen, dinitrogen tetraoxide  $(N_2O_4)$  or nitric acid. These are also classified into two categories:

(i) Monopropellants : The single liquid compounds used as propellants are those which decompose on heating to give out gases.

(ii) Biliquid propellants: Biliquid propellant: A double base propellant is a high strength, high modulus gel of cellulose nitrate (gun cotton) in glyceryl trinitrate or a similar solvent.

Following are the combinations of liquid propellants and oxidisers

(*supporter of combustion*) usually used:

(i) Synthetic rubber or cellulose based compounds and liquid oxygen.

- (ii) Liquid hydrogen and liquid oxygen.
- (iii) Kerosene and liquid oxygen.
- (iv) Hydrazine and nitric acid.

(v) Methyl hydrazine and dinitrogen tetraoxide.  $4CH_4NHNH_2 + 5N_2O_4 \rightarrow Methyl hydrazine$ 

 $4CO_2 + 9N_2 + 12H_2O_2$ 

 $N_2H_4 + O_2 \rightarrow N_2 + 2H_2O; \Delta H = -Heat.$ 

#### 85 **(c)**

Sodium alkyl benzene sulphonate is used as detergent.

#### 87 **(b)**

(i) Congo red is direct dye.

(ii) Alizarin is anthraquinone dye.

(iii) Aniline black is an ingrain dye. The last process of dyeing is done on fabric for such dyes.

#### 88 **(c)**

Oral contraceptive drug contain mestranol (anestrogen) and norethindrone (a progesterone derivative)

#### 89 **(b)**

A psychedelic drug produce visual and auditory hallucinations, e.g., lysergic acid diethyl amide (LSD) and mescaline.

#### 90 **(d)**

All are insecticides.

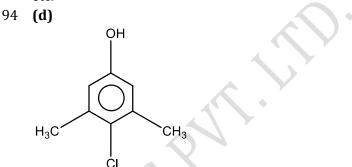
91 **(b)** 

Analgesics are used for getting relief from pain 92 **(a)** 

0.2 persent solution of phenol is used as an antiseptic

#### 93 **(a)**

Acid dyes are characterised by the presence of — COOH, — $SO_3H$  or phenolic group. They are applied in the presence of acidic solutions. They are usually applied to wool, silk, nylon. They have affinity for cotton. Common examples are, Orange-I, Orange-II, Methyl red, Methyl orange, etc.



It is main constituent of dettol, which is an alcoholic solution of it.

#### 95 **(d)**

The energy is provided by propellant.

#### 96 **(b)**

It is acetyl salicylic acid, *i. e.*, aspirin, analgesic and antipyretic.

#### 98 **(c)**

The energy of a propellant is measured in terms of a specific impulse,  $I_s$ , inside the motor of the rocket. It depends upon the flame temperature and average molecular mass of the gaseous products coming out of the rocket nozzle. The specific impulse is given by the following relationship with the average molecular mass Mand the flame temperature, T.

#### $I_s = \sqrt{(T/M)}$

99 **(a)** 

Due to anti-blood clotting action of aspirin, it is used to prevent heart attack

#### 100 **(b)**

Equanil, valium are a tranquilizer and is used for the treatment of stress and mental disease.

#### 101 **(c)**

Trimethyl stearyl ammonium bromide is known as invert soap.

#### 103 **(d)**

All are dyes.

#### 104 **(b)**

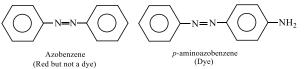
Cancer is molecular disease.

#### 106 **(d)**

A dye molecule is made up of two different parts (i) Chromophore (Greek : *chroma* = colour, *phoros* = bearing) and (ii) Auxochromes (Greek : auxo = increase, chroma = colour). The groups which produce colour in a compound, i.e., chromophores are usual unsaturated groups like nitro, nitroso, azo, azoxy, carbonyl and olefinic bonds. Auxochromes are usually acidic / basic functional groups like —OH, —COOH, —SO<sub>3</sub>H, — NH<sub>2</sub>,—NH*R*, —N*R*<sub>2</sub>.

A compound containing only a chromophore may be a coloured material but not a dye, e.g.,

azobenzene is red coloured but not a dye whereas *p*-aminoazobenzene (aniline yellow) is a dye.



107 (c)

Arsenic drugs are poisonous for syphilis.

109 **(a)** 

Broad spectrum antibiotics are effective against several different type of bacteria, *eg*, chlorophenicol is rapidly absorbed from the gastrointestinal tract and hence can be given orally in case of typhoid, dysentry, Acute fever, certain form of urinary infections, meningitis and pneumonia

#### 111 **(b)**

Barbital or varonal is a sleep producing, *ie*, hypnotic tranquillizer. It is used in sleeping pills and cause addiction

#### 113 **(d)**

Among the given antibiotics, only chloroamhenicol contains a nitro group attached to aromatic ring

chloramphenicol

- 115 (c)
- \_\_\_do\_

117 **(a)** 

Composite propellants: These consist of polymeric binder, like polyurethane or polybutadiene, (used as a *fuel*) and ammonium perchlorate (used as an *oxidiser*). The performance of these propellants can be enhanced by using additives like aluminium or magnesium the finely divided form with the fuel.

118 **(b)** 

Disparlure is a pheromone that attracts insects. 119 (a)

Vat dyes are insoluble compounds which upon

reduction give soluble (leuco form) product. The product may be either coloured or colourless and have affinity for specific fabrics, e.g., indigo.

#### 120 **(d)**

Chloroamphenicol is broad spectrum antibiotic.

#### 121 (c)

Boric acid is mild antiseptic, chloramphenicol is an broad spectrum antibiotic and aspirin is an analgesic as well as antipyretic

#### 122 **(c)**

The name of given compound is acetyl salicylic acid which is also known as aspirin, a well known analgesic

123 **(c)** 

Follow text.

#### 126 **(c)**

Cetyltrimethyl ammonium chloride is a cationic detergent. It is used to prepare cosmetics because it possesses germicidal properties.

#### 127 **(c)**

Disperse dyes are usually applied in the form of dispersion of finely divided dye in a soap solution in the presence of phenol, cresol, benzoic acid, etc. They are mainly used to dye dacron, nylon, synthetic fibre. Celliton fast pink B and celliton fast blue B are common examples.

#### 128 **(b)**

Heroin is acyl derivative of morphine.

#### 129 **(a)**

Soaps are the sodium or potassium salt of higher fatty acids, *e.g.*,  $C_{17}H_{35}COOK$  (potassium stearate). These are obtained by alkaline hydrolysis of oils and fats. The reaction is called saponification.

#### 131 **(d)**

A refrigerant is used for cooling purposes. This class includes freons.

#### 132 **(b)**

Tranquilisers are the drugs which used to relieve mental ailments. These are also known as psychotherapeutic drugs as they act on the central nervous system.

#### 134 **(b)**

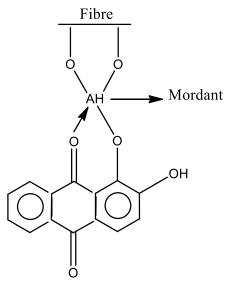
It is a fact.

#### 136 **(c)**

Broad spectrum antibiotics are the antibiotic which are effective against several type of harmful microorganisms. Tetracycline, chloromycetin and chloramphenicol are the common examples of broad spectrum antibiotics. Chloramphenicol is rapidly absorbed from the gastro-intestinal tract and hence, can be given orally. These can be used for curing typhoid, acute fever, dysentery, whooping cough etc.

#### 137 **(b)**

Alizarin is mordant dye. Alizarin gives a bright red colour with aluminium and a blue colour with barium.



#### 138 **(b)**

Morphine is an alkaloid-a class of organic compounds, of basic nature of plants origin containing at least one nitrogen atom in a ring structure of molecule, is analgesic.

#### 139 **(d)**

Follow text.

#### 141 **(b)**

Tranquillizers reduce anxiety and tension. They are also called psychototropic drugs. These are of two types: (a) Sedative: The drugs used for violent and mentally agitated patients e.g., equanil and diazepam. (b) Antidepressant: The drugs are used to patients who are highly depressed and lose self confidence e.g., tofranil, vitalin, amphetamines, etc.

#### 142 **(b)**

The anaesthetics produce temporary insensitibility to the vital function of all types of cells, specially of nervous systems and are used during surgical operations. These are classified as (i) General anaesthetic : producing

unconsciousness all over the body, e.g.,  $N_2O$ , cyclopropane, sodium pentothal, ether and chloroform and (ii) Local anaesthetic : Affect only the part of body, e.g., xylocaine, ethylchloride, procaine, etc.

#### 143 **(a)**

Ibuprofen is analgesics drug

#### 144 (d)

The structure of 2-acetoxy benzoic acid is as follows



It is commonly called aspirin, which is used as analgesic as well as antipyretic

#### 146 **(d)**

Aqueous solution of phenol is used as an antiseptic as well as disinfectant

#### 149 **(c)**

Antipyretic drugs reduce fever. Analgesic relieves in pain, antibiotics act against bacterial infections while tranquilisers are used against mental disorders.

#### 150 **(c)**

It is based on Newton's third law.

#### 151 **(d)**

All are characteristics of saccharin.

#### 153 (a)

Benzalkonium chloride, also known as alkyl dimethyl benzyl ammonium chloride is nitrogenous. Cationic surfactant and it is used as a antiseptic.

#### 154 **(b)**

Aspartame gets dissociated at cooking temperature

157 **(d)** 

TB, cholera, etc., are communicable diseases.

#### 158 **(d)**

All these are alkaloids.

#### 159 **(d)**

Yellow fever was the first viral disease detected in human being.

#### 160 **(b)**

SO<sub>2</sub> acts as oxidant.

#### 161 **(b)**

DDT is an insectioide, *i. e.*, the drug which kills insects,

CI	169 <b>(a)</b> Heroin is not a tranquillizer, it is a narcotic
It is CCl <sub>3</sub> CH	analgesic
	171 (c)
	Cationic detergents are also called invert
162 <b>(a)</b>	detergents. Tri methyl cetyl ammonium bromide, being a quaternary ammonium salt is a cationic
Some rocket fuels are given below:	detergent
1. Saturn booster rocket : Kerosene + Liquid	
for initial stage, liquid $O_2$ + Liquid $H_2$ for	Bacteriostatic drugs inhibit the growth of
higher stage.	organism while bactericidal drugs kill the
2. Titan ballistic missile : Hydrazine $+N_2O_4$	
3. Space shuttle : Liquid H <sub>2</sub> +Liquid	
4. Proton (Russian rocket) : Kerosene + Liquic	Biliquid propellant : A double base propellant is a
02	high strength, high modulus gel of cellulose
5. SLV (Space launch : Solid propellant	nitrate (gun cotton) in glyceryl trinitrate or a
vehicle) and ASLV	similar solvent.
(Augmented space	177 (c)
launch vehicle) 6. PSLV (Polar space : Solid propellant ir	$C_{10}H_{17}OH$ (Geraniol) a liquid terpene alcohol
6. PSLV (Polar space : Solid propellant ir and 3 <sup>rd</sup> stage and biliquid propellant	
launch vehicle –an Indian like	178 <b>(c)</b> It is a bacterial disease.
$N_2O_4$ +Unsymmetrical dimethyl hydrazine	179 <b>(b)</b>
(UDMH) in the	A branch of science which deals with treatment of
rocket recently launched) second stage and	diseases using suitable chemical is known as
$N_2O_4$ + Monomethyl hydrazine in the fourth	chemotherapy
stage	180 <b>(c)</b>
164 <b>(a)</b>	Branched alkyl groups are not dissociated easily
A mordant is any substance which can be fixed	5 1
the fibre and which can be dyed later on. Mostl	
hydroxides or basic salts of chromium, alumini and iron are used as mordants. A dye which	(-)
imparts different colours in the presence of	$\gamma$ -isomer of BHC is called gammexane. 185 <b>(c)</b>
different mordants is referred to as a mordant	It is a fact.
dye, e.g., alizarin is a mordant dye. When	187 <b>(c)</b>
mordanted with aluminium salt solution, it	Aspirin is a moderate acid( $pK_a = 3.5$ ), hence is
imparts rose-red colour to fabric but the same	almost unionized in stomach due to strong acidic
fabric is dyed blue when it is mordanted with	medium of it (because of HCl). It is due to
barium salt and it dyes violet is mordant with	common ion effect.
ferric salt.	While in small intestine, the medium is alkaline,
165 (d)	hence aspirin will be sufficiently ionized in small
Phenol is antiseptic as well as disinfectant (Kill	
bacteria). 166 <b>(d)</b>	188 <b>(b)</b>
Sodium alkyl sulphate is an anionic detergent a	The molecules which contain both the oxidizer and the fuel elements in the same molecule are
gives anion which acts as surfactant.	called double base propellants, <i>e.g.</i> , nitroglycerine
$RCH_2 - SO_3Na \rightarrow RCH_2 - SO_3^- + Na^+$	and nitrocellulose. In this nitrocellulose gels in
Sodium alkyl anionic part	nitroglycerine and sets to a solid mass.
sulphate	189 <b>(d)</b>
168 <b>(c)</b>	All are characteristics of vanillin.
Liquid hydrogen and liquid oxygen are good fu	el. 190 <b>(b)</b>

*Trans* form of indigo is more stable.

191 (d)

 $Sr^{2+} - red$  $Mg^{2+} - violet$ 

 $Al^{2+} - pink$ 

Ba<sup>2+</sup> – blue

Alizarin is a mordant dye. It gives different colour to the fabric with different metal ions.

192 **(c)** 

It is herbicide (kill herbs).

193 **(b)** 

Rocket propellant are used as fuel for space rockets.

194 **(a)** 

Paracetamol is an antipyretic. It is used to lower the temperature of the body in high fever.

#### 195 **(a)**

Follow preparation of malachite green.

196 **(a)** 

It is a fact.

197 (d)

Ofloxacin is used as antibiotic

- 198 **(b)**
- It is a fact.
- 199 **(b)**

Amphetamine is used as antidepressant drug.

204 **(b)** 

Interferon is a virus present in animal cells.

- 205 **(d)** 
  - Barbituric acid is used as a tranquilizer.
- 206 (a)

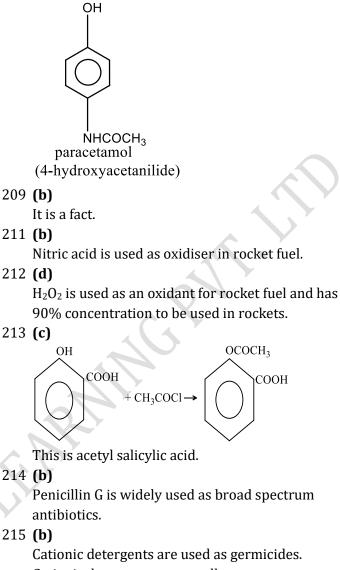
It is used for dysentery.

207 (c)

Sulpha drugs are derivative of sulphanilamide 208 **(c)** 

Analgesic drugs are used in relieving pain while antipyretic drugs are used to control fever.

Paracetamol is wideley used as an antipyretic as well as analgesic.



Cationic detergents are usually quaternary ammonium salts. Thus, cetyltrimethyl ammonia chloride, a quaternary ammonium salt is a cationic detergent and used as a germicide

#### 216 **(d)**

Antiseptics and disinfectants both inhibit and kill the microorganisms but disinfectants are not safe to apply over living tissues

#### 217 (c)

Penicillin is an effective medicine for pneumonia disease.

#### 218 **(b)**

The correct structure of drug paracetamol (4-acetamidophenol) is (b).

#### 219 **(a)**

Phenacetin is used as antipyretics.

# OC<sub>2</sub>H<sub>5</sub>

phenacetin

#### 221 **(d)**

Analgesics are used for relieving pain. Ibuprofen, naproxen, aspirin and diclofenac sodium all are examples of non-narcotic analgesics. Valium is used for relieving tension and mental stress, so it is a tranquillizer, not analgesic.

#### 222 (a)

It is a very effective antibiotic for tuberculosis.

#### 223 **(c)**

Analgesic these drugs relieve pains *e.g.*, novalgin, aspirin, etc. Antibiotic these drugs are produced by microorganisms and are capable of destroying other microorganisms. *e.g.*, penicillin etc. Antipyretic these drugs bring down the body temperature in high fever, *e.g.*, paracetamol, aspirin etc.

Sulpha drugs generally these drugs have antibacterial action, *e.g.*, sulphadiazine etc.

#### 224 **(c)**

Indigo is obtained in India by plants.

#### 225 **(a)**

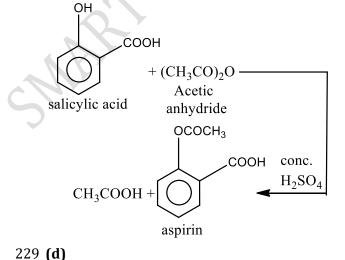
Follow text.

#### 227 **(d)**

All are fuels.

#### 228 **(b)**

Aspirin (2-acetoxy benzoic acid) is an analgesic. It is obtained by acetylating salicylic acid with acetic anhydride and conc  $H_2SO_4$ .



It belongs to phthalein dyes.

230 **(c)** 

Indigo is a dark blue solid insoluble in water.

234 **(c)** 

Aspirin an antipyretic is, COOH *i.e.*, acetyl salicylic acid,

*i.e.*, a drug which is responsible for lowering the temperature of feverish organism to normal. Other antipyretic drugs are paracetamol, phenacetin.

#### 236 **(a)**

Phenyl salicylate is salol; methyl salicylate, etc.,

#### 238 **(a)**

Anaesthetics are those drugs which are used to produce insensitivity *e.g.*, procaine, chloroform, westrosol etc.

#### 239 **(d)**

The functional group present in salol are —OH and —COO*R*. Salol is phenyl salicylate. Its structure is as

# ОН

salol

#### 243 **(c)**

Tincture of iodine is prepared by dissolving iodine and KI in water and making the solution with rectified spirit. So, it is alcoholic solution of  $I_2$ .

#### 244 **(a)**

Greater the branching, greater is the nonbiodegradability of a detergent. A nonbiodegradable detergent cause maximum pollution

#### 245 **(b)**

Antibiotics are the chemical substances produced by microorganisms (bacteria, fungi, etc), that can inhibit the growth of other microorganisms, *e.g.*, penicillin, erythromycin, tetracycline, ofloxacin but oxytocin is a peptide hormone which is secreted by master gland.

#### CHEMISTRY

#### Assertion - Reasoning Type

This section contain(s) 0 questions numbered 1 to 0. Each question contains STATEMENT 1(Assertion) and STATEMENT 2(Reason). Each question has the 4 choices (a), (b), (c) and (d) out of which **ONLY ONE** is correct.

- a) Statement 1 is True, Statement 2 is True; Statement 2 is correct explanation for Statement 1
- b) Statement 1 is True, Statement 2 is True; Statement 2 is not correct explanation for Statement 1
- c) Statement 1 is True, Statement 2 is False
- d) Statement 1 is False, Statement 2 is True

#### 1

- **Statement 1:** Aspirin can cause ulcer in stomach, when taken empty stomach
- Statement 2: Aspirin prevents platelet coagulation as it has antiblood clothing agent

#### 2

- **Statement 1:** Dettol is antiseptics liquids
- Statement 2: It is a mixture of chloroxylenol and terpineol

- **Statement 1:** Tertiary butyl hydroquinone is an antioxidant
- Statement 2: Antioxidants inhibit free radical reactions
- 4
- Statement 1: The cleansing action of soaps or detergents involve the formation of a stable emulsion of oil in water.Statement 2: The dispersed dirt particles in the solution or over the fibres are organic substances.
- 5
- Statement 1:A straight chain alkyl sulphonate is almost biodegradable while branched alkyl sulphonate<br/>is non biodegradable.
- **Statement 2:** The hydrocarbon side chain stops bacteria from attacking and breaking the chains.
- 6
- **Statement 1:** Antioxidants inhibits free radical reactions.
- **Statement 2:** Tertiary butyl hydroquinone is an antioxidant.

**Statement 1:** Barbiturates such as seconal, luminal used as hypnotic tranquillizer

**Statement 2:** It is sleep producing drug

8

- **Statement 1:** 0.2 percent solution of phenol is an antiseptic while its 1 percent solution is disinfectant.
- **Statement 2:** A solution of phenol in high concentration is not safe to use over living tissues.

#### 9

- **Statement 1:** Aspirin (2-acetoxy benzoic acid) has antipyretic properties also.
- **Statement 2:** Aspirin given relief from pain.

#### 10

SMA

- **Statement 1:** Paracetamol is popular antipyretics
- **Statement 2:** It is used to bring down the body temperature during fever

CHEMISTRY

					SWER I				
	c 2] a 6]	3) 7)	a a	4) 8)	a 9) a	b	10)	а	$\frown$
								6	
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51	R								
22									

#### CHEMISTRY

#### : HINTS AND SOLUTIONS :

#### 1 **(c)**

Aspirin gets hydrolysed to form salicylic acid which creates problems in the stomach. Hence, statement II is incorrect

#### 2 **(b)**

Dettol is antiseptics liquid which is mixture of chloroxylenol and terpineol and is used to kill bacteria and germs. Hence, statement I and II both are correct but statement II is not correct explanation of statement I

#### 3 **(a)**

Antioxidants when added to the fats and fat containing food, they prevent their oxidation by interrupting the free radical chain reactions involved in lipid oxidation

#### 4 **(a)**

The dispersed dirt particles in the solution or over the fibers are organic substance(grease etc) and the soap from emulsion of oil (grease) in water.

#### 5 **(a)**

Reason is the correct explanation of assertion as branching in long hydrocarbon chain of detergent makes it non biodegradable.

6 **(a)** 

MAR

Antioxidants when added to fats and fat containing foods prevent their oxidation and thus prolong their oxidation and thus prolong their life. They function by interrupting the free radical chain reactions involved in the lipid oxidation.

#### 7 **(a)**

Barbiturates such as seconal, luminal are used as hypnotic transquillizer. Hypnotic drugs means sleep producing drugs

#### (a)

8

9

Reason is correct explanation of asseration.

#### (b)

Aspirin is an analgesic as well as antipyretic. As it gives relief from pain, so called analgesic and as lowers the body temperatures called antipyretic.

#### 10 **(a)**

Statement II is correct explanation of statement I

#### CHEMISTRY

#### Matrix-Match Type

This section contain(s) 0 question(s). Each question contains Statements given in 2 columns which have to be matched. Statements (A, B, C, D) in **columns I** have to be matched with Statements (p, q, r, s) in **columns II**.

1. Match list I with list II and select the correct answer using the codes given below the lists

#### Column-I Column-II (A) Iodoform (p) Anaesthetic (B) Methyl salicylate Antiseptic (q) (C) Diethly ether Insecticide (r) (D) Hexachlorocyclohexane Detergent (s) Pain balm (t) **CODES:** А В С D a) b e С d b) d b а c) b е d) С а b Match the chemical in List I with their used in List II Column-I Column- II (A) Sodium perberate (1) Disinfectant **(B)** Chlorine (2) Antiseptic Bithional Milk bleacking agent **(C)** (3) Potassium stearate (D) (4) Soap **CODES**: А В С D 1 2 3 4 a) 2 b) 3 4 1

2.

C)	3	1	2	4
d)	4	1	2	3

3. Match metal ion (List I) with colour (List II) in presence of alizarin.

		Col	umn-I			Column- II
(A)	Sr <sup>2+</sup>				(1)	Blue
<b>(B)</b>	Mg <sup>2+</sup>				(2)	Pink
(C)	Al <sup>3+</sup>				(3)	Violet
(D)	Ba <sup>2+</sup>				(4)	Red
COD	ES :					
	Α	В	С	D		
a)	1	4	3	2		
b)	2	1	4	3		
c)	3	2	1	4	å	071
d)	4	3	2	1	~	
SM	R			the		

#### CHEMISTRY



#### CHEMISTRY

### : HINTS AND SOLUTIONS :

#### 2 (c)

The correct matching is a follow :

	Chemical	Use
(A)	Sodium	Milk bleaching
	perborate	agent
(B)	Chlorine	Disinfectant
(C)	Bithional	Antiseptic
(D)	Potassium	Soap
	stearate	

3

(d)

 $Sr^{2+} - red$ 

Mg<sup>2+</sup> – violet

 $Al^{2+} - pink$ 

 $Ba^{2+} - blue$ 

Alizarin is a mordant dye. It gives different colourto the fabric with different metal ions.