

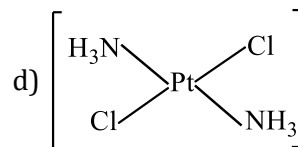
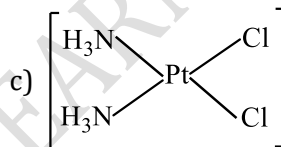
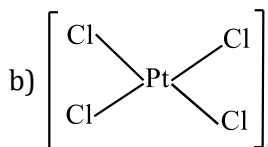
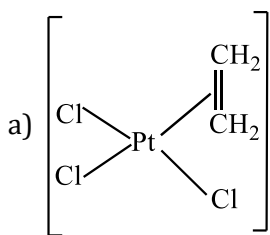
CHEMISTRY IN EVERYDAY LIFE

CHEMISTRY

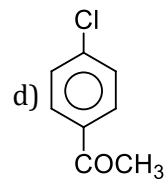
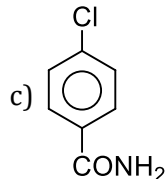
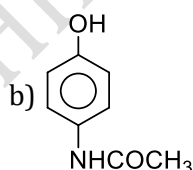
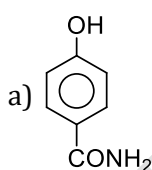
Single Correct Answer Type

- Salol can be used as
 - Antiseptic
 - Antipyretic
 - Analgesic
 - Disinfectant
- Which of the following is an antipyretic?
 - Quinine
 - Paracetamol
 - Luminal
 - Popperazine
- Which of the following is an example of basic dye?
 - Alizarin
 - Malachite green
 - Indigo
 - Orange I
- Which of the following is not antibiotic?
 - Tetracyclin
 - Neomycin
 - Carbomycin
 - Cyclohexane
- Fluoresce in, a well known dye is obtained by the reactions of:
 - Phthalic anhydride and phenol
 - Phthalic anhydride and resorcinol
 - Succinic acid and resorcinol
 - Phthalic anhydride and catechol
- Which of the following is bacteriostatic?
 - Penicillin
 - Erythromycin
 - Amino glycodine
 - Ofloxacin
- One of the most widely used drug in medicine, iodex is:
 - Methyl salicylate
 - Ethyl salicylate
 - Acetyl salicylic acid
 - o*-hydroxy benzoic acid
- The substances which effect the central nervous system and induce sleep are called:
 - Tranquillizers
 - Antipyretics
 - Analgesics
 - None of these
- Methyl orange is an indicator in acid-alkali titration. It gives:
 - Yellow colour in alkaline medium
 - Red colour in acid medium
 - Yellow colour in acid medium
 - Yellow colour in alkaline medium and red colour in acid medium
- Red ink is prepared from:
 - Phenol
 - Aniline
 - Congo red
 - Eosin
- An insoluble dye is reduced to a soluble colourless leuco form by an alkaline reducing agent. The fibre is soaked in the dye solution and then exposed to air to develop the colour. The dye is
 - Mordant dye
 - Vat dye
 - Azo dye
 - Direct dye
- Tranquillizers are substances used for the treatment of
 - Cancer
 - AIDS
 - Mental diseases
 - Physical disorders
- Detergents obtained from LAB are biodegradable. LAB stands for
 - Laboratory tested raw material
 - Low anionic balance
 - Linear alkyl benzene
 - None of the above
- Phenacetin is used as:
 - Antipyretic
 - Antiseptic
 - Antimalarial
 - Analgesic
- The propellant in the proposed PSLV rocket of the Indian space programme shall consist of:
 - A composite solid propellant
 - Biliquid propellants such as N_2O_4 + unsymmetrical dimethyl hydrazine (UDMH) and N_2O_4 + monomethyl hydrazine (MMH)
 - Both (a) and (b) in different stages of rocket propulsion

- d) Kerosene and liquid oxygen
16. Which of the following is a hypnotic drug?
 a) Luminal b) Salol c) Catechol d) Chemisol
17. Chloramine-T is a
 a) Disinfectant b) Antiseptic c) Analgesic d) Antipyretics
18. Select the incorrect statement regarding detergents
 a) These have a non-polar organic part and a polar group
 b) These are surface active reagent
 c) These are sodium salt of fatty acids
 d) These are not easily biodegradable
19. The antibiotic streptomycin is specific against:
 a) Tuberculosis b) Typhoid c) Malaria d) AIDS
20. Paracetamol is
 a) Both antipyretic and analgesic b) Only analgesic
 c) Only antipyretic d) Antimicrobial
21. An antibiotic effective in treatment of pneumonia, bronchitis etc, is
 a) Pencillin b) Patalin c) Chloromycetin d) Tetracycline
22. Bithional is added to soap as an additive to function as a/an
 a) Softener b) Hardener c) Dryer d) Antiseptic
23. Which of the following is considered to be an anticancer species?

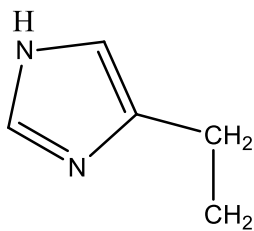


24. Which of the following is not a artificial sweetener?
 a) Sucralose b) Alitame c) Saccharin d) Sucrose
25. Which of the following is used as an oxidizer in rocket propellants?
 a) Alcohol b) Acrylic rubber
 c) Hydrazine d) Ammonium perchlorate
26. The correct structure of the drug paracetamol is



27. Which of the following forms cationic micelles above certain concentration?
 a) Sodium ethyl sulphate b) Sodium acetate
 c) Urea d) Cetyltrimethylammonium bromide
28. A medicine which promotes the secretion of urine is called:
 a) Uretic b) Monouretic c) Diuretic d) Triuretic
29. Aspirin is a/an
 a) Narcotic drug b) Antipyretic c) Antimalarial d) Antiseptic
30. Bithional is an example of
 a) Disinfectant b) Antiseptic c) Antibiotic d) Analgesic
31. Hydrazine as a drug is also used in the treatment of:
 a) Typhoid b) Cholera c) Malaria d) Tuberculosis
32. Chloromycetin (Chloramphenicol) is effective in the treatment of:
 a) Tuberculosis b) Malaria c) Typhoid d) Cholera
33. A hybrid rocket propellant uses

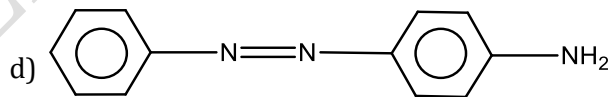
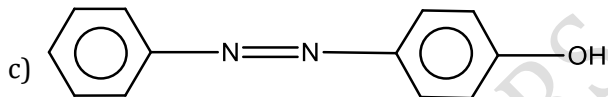
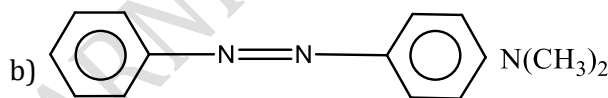
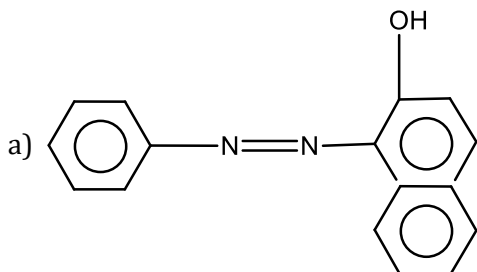
- a) A liquid oxidizer and a solid fuel
c) A biliquid propellant
34. Which of the following is not a chromophore?
a) $-\text{N}=\text{N}-$ b) $-\text{NO}$ c) $-\text{NO}_2$ d) $-\text{NH}_2$
35. The insecticide containing 99% γ -isomer of benzene hexachloride is known as:
a) Lindane b) TNT c) Malathion d) Methoxychlor
36. The poisonous gas evolved in Bhopal tragedy from the pesticide plant of Union Carbide Co. was:
a) CO b) Methyl isocyanate c) Phosgene d) Chloropicrin
37. One of the most known antiseptic, dettol is a mixture of terpineol and
a) Bithional b) Chloroxylenol c) *o*-cresol d) Serotonin
38. The formulation of Dettol contains:
a) Chloroxylenol b) Terpineol c) Alcohol d) All of these
39. The blue print process involves the use of:
a) Indigo dyes b) Vat dyes c) Iron compounds d) Zinc compounds
40. Chloramphenicol is used as an:
a) Analgesic b) Anaesthetic c) Antibiotic d) Antiseptic
41. Which one of the following is employed as antihistamine?
a) Omeprazole b) Chloramphenicol c) Diphenyl hydramine d) Norothindrone
42. Which of the following is a hallucinogenic drug?
a) Methedrine b) Calmpose c) LSD d) Seconal
43. Detergents are prepared by the action of H_2SO_4 followed by neutralisation by starting with
a) Choesterol b) Lauryl alcohol c) Cyclohexanol d) *p*-nitrophenol
44. The drug



CH_2-NH_2 is used as

- a) Vasodilator b) Analgesics c) Antacid d) Antiseptic
45. Which of the following is not a surfactant?
a) $\text{CH}_3 - (\text{CH}_2)_{15} - \text{N}^+(\text{CH}_3)_3 \text{Br}^-$ b) $\text{CH}_3 - (\text{CH}_2)_{14} - \text{CH}_2\text{NH}_2$
c) $\text{CH}_3 - (\text{CH}_2)_{16} - \text{CH}_2\text{OSO}_2^- \text{Na}^+$ d) $\text{OHC} - (\text{CH}_2)_{14} - \text{CH}_2 - \text{COO}^- \text{Na}^+$
46. Sulpha drugs are used for:
a) Precipitating bacteria
b) Removing bacteria
c) Decreasing the size of bacteria
d) Stopping the growth of bacteria
47. Indigo belongs to the class of:
a) Mordant dye b) Vat dye c) Direct dye d) Disperse dye
48. Various phenol derivatives, tincture of iodine (2-3% I_2 in water/alcohol) and some 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?
a) Aspirin b) Chloromycetin c) Chloroquin d) Madribon
51. Which one of the following is known as broad spectrum antibiotics?
a) Streptomycin b) Ampicillin c) Chloramphenicol d) Penicillin G
52. Aspirin is an acetylation product of

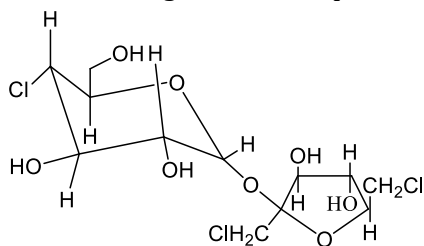
- a) *p*-dihydroxybenzene
 c) *o*-dihydroxybenzene
53. Fluorescein is an example of
 a) Azo dyes
 c) Triphenyl methane dyes
54. Which of the following drugs is a tranquillizer and sedative?
 a) Sulphadiazine b) Papaverine c) Equanil d) Mescaline
55. Aspirin is
 a) Acetylsalicylic acid b) 2-methoxybenzoic acid
 c) Acetyloxalic acid d) Methylbenzoic acid
56. Chloroquine is an example of:
 a) Antipyretic b) Antimalarial c) Antibacterial d) Antitubercular drug
57. A combination of nitrocellulose and nitroglycerine is a propellant of the type:
 a) Hybrid propellant
 b) Mono propellant
 c) Double base propellant
 d) Biliquid propellant
58. Which of the following is red dye?



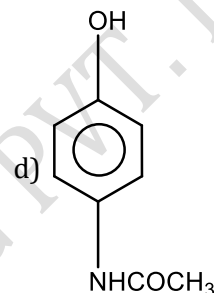
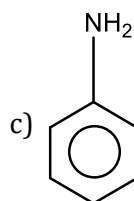
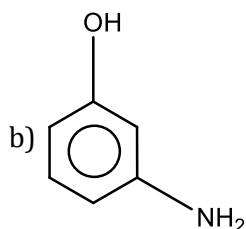
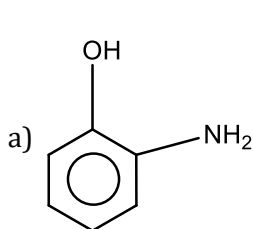
59. Medicine which is antibiotic is
 a) Ampicillin b) Phenacetin c) Calmpose d) Chloroquine
60. Baby talcum powders contain
 a) Benzoin, glyceryl discetate b) Zinc acetate, glyceryl diacetate
 c) Zinc stearate, boric acid d) Zinc stearate, cinnamic ester
61. A synthetic detergent is a
 a) Cleansing agent b) Drug c) Catalyst d) Soap
62. The safest and the most common alternative of sugar is
 a) Glucose b) Aspartame c) Saccharin d) cyclodextrin
63. Which of the following is a direct dye?
 a) Phenolphthalein b) Congo red c) Alizarin d) Indigo
64. Salol can be used as:
 a) Antiseptic b) Antipyretic c) Analgesic d) None of these
65. Alizarin gives a red colour by mordanting it with the sulphate of a metal. The metal ion involved is:
 a) Cr^{3+} b) Fe^{3+} c) Al^{3+} d) Sn^{2+}
66. Which one of the following is a vat dye?
 a) Alizarin b) Indigo c) Malachite green d) Methyl orange
67. Which one of following types of drugs reduces fever?
 a) Analgesic b) Antipyretic c) Antibiotic d) Tranquilizer
68. Alizarin a mordant dye is not used in:
 a) Cotton dyeing
 b) Printing

- c) Painting
- d) Chromium lakes for wood dyeing

69. The following structure represents



- a) Sucrose
 - b) Sucralose
 - c) Aspartame
 - d) Alitame
70. Which of the following gives paracetamol on acetylation?



71. Which of the following is a natural dye?

- a) Martius yellow
- b) Alizarin
- c) Phenolphthalein
- d) Orange I

72. Medicine which is an antibiotic 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 formula

- a) $\text{CH}_3\text{CONHCH}_2\text{COOH}$
- b) $\text{C}_6\text{H}_5\text{CONHCH}_2\text{COOH}$
- c) $\text{C}_6\text{H}_5\text{NHCOOH}$
- d) $\text{NH}_2\text{CONHCOOH}$

75. Which of the following is not an antipyretic?

- a) Aspirin
- b) Paracetamol
- c) Barbituric acid
- d) Phenacetin

76. An azo dye is fixed on fabrics by the process applicable in:

- a) Vat dyes
- b) Mordant dyes
- c) Developed dyes
- d) Substantive dyes

77. Aspirin is an acetylation product of

- a) *o*-hydroxybenzoic acid
- b) *o*-hydroxybenzene
- c) *m*-hydroxybenzoic acid
- d) *p*-dihydroxybenzene

78. Which statement is false?

- a) Some disinfectants can be used antiseptics at low concentration
- b) Sulphadiazine is a synthetic antibacterial
- c) Ampicillin is a natural antibiotic
- d) Aspirin is analgesic and antipyretic both

79. An insoluble coloured compound formed by action of metallic salts on dyes is known as:

- a) Lake
- b) Mordant
- c) Dye intermediate
- d) None of these

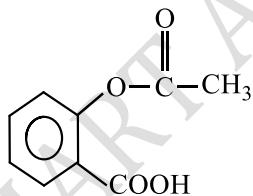
80. Which of the following is a germicide also?

- a) Cationic detergent
- b) Anionic detergent
- c) Non-ionic detergent
- d) None of the above

81. An azo dye is formed by interaction of an aromatic diazonium chloride with:

- a) A phenol
- b) An aliphatic primary amine
- c) Benzene
- d) Nitrous acid

82. Which of the following is not an antiseptic drug?
 a) Iodoform b) Dettol c) Gammexane d) Genatian violet
83. The substances which affect the central nervous system and induce sleep are called
 a) Antipyretics b) Tranquilizers c) Analgesics d) None of these
84. An example of a liquid propellant is:
 a) Liquid N_2O_4 + kerosene
 b) HNO_3 + HCl
 c) H_2SO_4 + hydrazine
 d) None of the above
85. Sodium alkyl benzene sulphonate is used as
 a) Soap b) Fertilizer c) Detergent d) Pesticide
86. Which of the following drugs is an analgesic?
 a) Sulphaguanidine b) Paludrin c) Analgin d) Iodex
87. Which of the following is an ingrain dye?
 a) Congo-red b) Aniline black c) Alizarin d) Indigo
88. Oral contraceptive drugs contain
 a) Mestranol b) Norethindrone c) Both (a) and (b) d) None of these
89. An example of a psychedelic agent is:
 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 relief from pain are called
 a) Antipyretics b) Analgesics c) Antibiotics d) Antiseptics
92. Which of the following is used as an antiseptic?
 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 phenol is called
 a) Chloramphenicol b) Paracetamol c) Barbital d) Dettol
95. A space rocket is propelled by:
 a) An automobilic engine
 b) Nuclear engine
 c) Steam engine
 d) Mixture of fuel and oxidiser called propellant
96. The following compound is used as:



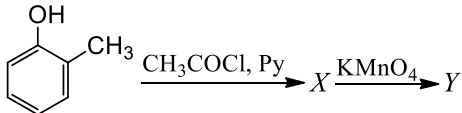
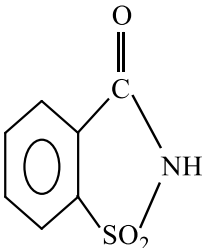
- a) An anti-inflammatory compound
 b) Analgesic
 c) Hypnotic
 d) Antiseptic
97. The antiseptic action of dettol is due to
 a) Chlorobenzene b) Chloroxylenol c) Terpeneol d) Both (b) and (c)
98. Which is the relation between the specific I_s impulse and the critical temperature T_c attained in a rocket blast?
 a) $I_s \geq T_c$ b) I_s and T_c^2 c) $I_s \geq T_c^{1/2}$ d) $I_s \geq 1/T_c$
99. The drug used for prevention of heart attacks is

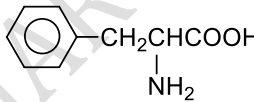
- a) Aspirin b) Valium c) Chloramphenicol d) Cephalsoprin
100. Which one of the following is employed as a tranquillizer?
 a) Chlorpheniramine b) Equanil c) Naproxen d) Tetracycline
101. Which of the following is known as invert soap?
 a) Pentaerythritol monostearate b) Sodium stearyl sulphate
 c) Trimethyl stearyl ammonium bromide d) Ethoxylated nonyphenol
102. Trade name of aspartame is
 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 measles 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 groups is not an auxochrome?
 a) $-\text{N}(\text{CH}_3)_2$ b) $-\text{H}$ c) $-\text{OCH}_3$ d) $\text{>C}=\text{N}$
107. Arsenic drugs are mainly used in the treatment of:
 a) Jaundice b) Typhoid c) Syphilis d) Cholera
108. Which of the following sets of reactants is used for preparation of paracetamol from phenol?
 a) $\text{HNO}_3, \text{H}_2/\text{Pd}, (\text{CH}_3\text{CO})_2\text{O}$ b) $\text{H}_2\text{SO}_4, \text{H}_2/\text{Pd}, (\text{CH}_3\text{CO})_2\text{O}$
 c) $\text{C}_6\text{H}_5\text{N}_2\text{Cl}, \text{SnCl}_2/\text{HCl}, (\text{CH}_3\text{CO})_2\text{O}$ d) $\text{Br}_2/\text{H}_2\text{O}, \text{Zn}/\text{HCl}, (\text{CH}_3\text{CO})_2\text{O}$
109. Which one is a broad spectrum 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 d) Aluminium phosphate
111. Which of the following statement is not true about the drug barbital?
 a) It causes addiction b) It is a non-hypnotic drug
 c) It is tranquillizer d) It is used insleeping pills
112. Heroin is acetyl derivative of
 a) Caffeine b) Cocaine c) Nicotine d) Morphine
113. An antibiotic contains nitro group attached to aromatic nucleus in its structure. It is
 a) Pencillin b) Streptomycin c) Tetracyclin d) Chloramphenicol
114. Morphine on alkylation and acetylation gives, respectively
 a) Heroin, codeine b) Heroine, meperidine c) Codeine, heroin d) Meperidine, heroin
115. A diazonium salt reacts with a phenol to give an azo dye. This reaction is known as:
 a) Diazotisation b) Condensation c) Coupling d) Reduction
116. Which of the following is not a chlorinated insecticide?
 a) DDT b) Methoxychlor c) Parathion d) BHC
117. A composite solid propellant consists of:
 a) Polyurethane or polybutadiene and ammonium perchlorate
 b) Nitroglycerine and nitrocellulose
 c) Hydrazine and N_2O_4
 d) Kerosene and liquid oxygen
118. Which of the following is pheromone?
 a) Linalool b) Disparlure c) BHA d) Alifame
119. Which of the following is a vat dye and often used in dyeing jeans?
 a) Indigo b) Alizarin c) Picric acid d) Crystal violet
120. Chloroamphenicol is an:
 a) Antifertility drug b) Antihistaminic c) Antiseptic and d) Antibiotic broad

disinfectant

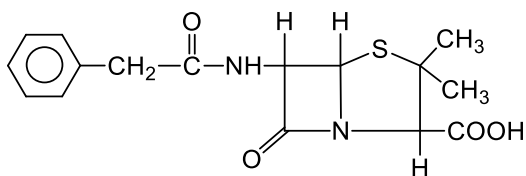
spectrum

121. In the following sets of compounds, the one which contains only medicinal compounds is
- Alizarin, phenacetin, morphine
 - Aspirin, gentian violet, phenolphthalein
 - Boric acid, chloramphenicol, aspirin
 - 9-oxodecanoic acid, boric acid, morphine
122.  The compound is used as
- Antiseptic
 - Antibiotic
 - Analgesic
 - Pesticide
123. Which of the following structures represents a colourless substance?
- $$\begin{array}{c} \text{C}_6\text{H}_5-\text{N}=\text{N}-\text{C}_6\text{H}_5 \\ | \\ \text{O} \end{array}$$
 - $\text{C}_6\text{H}_5-\text{N}=\text{N}-\text{C}_6\text{H}_5$
 - $\text{C}_6\text{H}_5-\text{NH}-\text{NH}-\text{C}_6\text{H}_5$
 - None of the above
124. Paracetamol is
- Methyl salicylate
 - Phenyl salicylate
 - N-acetyl *p*-amino phenol
 - Acetyl salicylic acid
125. Which of the following is not antiseptic drug?
- Iodoform
 - Dettol
 - Lindane
 - Gentian violet
126. Select the detergent that is used to prepare cosmetics.
- DDBS
 - Polyethylene glycol
 - Cetyltrimethylammonium chloride
 - LAS
127. Which one is disperse dye?
- Congo red
 - Alizarin
 - Celliton
 - None of these
128. Heroin is a derivative of:
- Cocaine
 - Morphine
 - Caffeine
 - Nicotine
129. Which of the following represents soap?
- $\text{C}_{17}\text{H}_{35}\text{COOK}$
 - $\text{C}_{17}\text{H}_{35}\text{COOH}$
 - $\text{C}_{15}\text{H}_{31}\text{COOH}$
 - $(\text{C}_{17}\text{H}_{35}\text{COO})_2\text{Ca}$
130. The drug, effective for the treatment of typhoid is
- Paracetamol
 - Luminal
 - Chloromycetin
 - Novalgin
131. Which of the following compounds is used as refrigerant?
- Carbon tetrachloride
 - Acetone
 - Carbon tetrafluoride
 - Dichlorodifluoromethane
132. Tranquilisers are also known as
- Psychosomatic drugs
 - Psychotherapeutic drugs
 - Psychosystolic drugs
 - None of the above
133. Soaps are classified as
- Ether
 - Salts of fatty acids
 - Carbohydrates
 - None of these
134. Penicillin is a:
- Hormone
 - Antibiotic
 - Antipyretic
 - Vitamin
135. Antiseptic chloroxylenol is
- 4-chloro-3, 5-dimethyl phenol
 - 3-chloro-4, 5-dimethyl phenol
 - 4-chloro-2, 5-dimethyl phenol
 - 5-chloro-3, 4-dimethyl phenol
136. Chloramphenicol is
- Narrow spectrum antibiotic
 - Broad spectrum analgesic
 - Broad spectrum antibiotic
 - Broad spectrum antibacterial

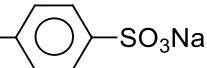
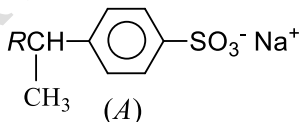
137. Alizarin belongs to the class of
 a) Vat dyes b) Mordant dyes c) Basic dyes d) Reactive dyes
138. Morphine an alkaloid is:
 a) Anaesthetic b) Analgesic c) Antiseptic d) Antibiotic
139. Identify the wrong statement regarding alizarin:
 a) Alizarin was extracted from the roots of the madder plant
 b) Its chemical name is 1, 2-dihydroxy anthraquinone
 c) It is fixed to fabrics by using mordants like aluminium sulphate giving fast red colour
 d) It has red crystal soluble in alkalis and the solution imparts red colour to fabrics
140. Which of these is a hypnotic?
 a) Metaldehyde b) Acetaldehyde c) Paraldehyde d) None of these
141. The drug used as an antidepressant is:
 a) Luminol b) Tofranil c) Mescaline d) Sulphadiazine
142. Which one of the following is employed as a tranquillizer drug?
 a) Promethazine b) Valium c) Naproxen d) Mifeprestone
143. The drug, which is not a tranquillizer, is
 a) Ibuprofen b) Veronal c) Luminal d) Seconal
144. 2-acetoxybenzoic acid is used as
 a) Antimalarial b) Antidepressant c) Antiseptic d) Antipyretic
145. 
 The final product "Y" is medicine. Which of the following is incorrect regarding "Y"?
 a) It has analgesic as well as antipyretic properties b) It helps to prevent heart attack
 c) It has anti-blood clotting action d) It suppresses the gastric anomalies
146. A substance which can act both as an antiseptic and disinfectant is
 a) Aspirin b) Chloroxylenol c) Bithional d) Phenol
147. Drug which helps to reduce anxiety and brings about calmness is
 a) Tranquilliser b) Diuretic c) Analgesic d) Antihistamine
148. A drug that is antipyretic as well as analgesic is
 a) Chlorpromazine hydrochloride b) *para*-acetamidophenol
 c) Chloroquin d) Penicillin
149. Which one of the following types of drugs reduces fever?
 a) Tranquiliser b) Antibiotic c) Antipyretic d) Analgesic
150. Thrust imparted to the rocket is governed by the:
 a) Third law of thermodynamics
 b) Gravitational law
 c) Newton's third law
 d) None of the above
151. Which is correct about saccharin?
 a) 
 It is
 b) It is 600 times sweeter than sugar
 c) It is used as sweetening agent
 d) All of the above
152. Chemically aspirin is known as

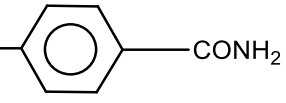
- a) Salicylic acid
c) 2-acetoxybenzoic acid
- b) Salicylaldehyde
d) Phenyl salicylate
153. Benzalkonium chloride is a
a) Cationic surfactant and antiseptic.
b) Anionic surfactant and soluble in most of organic solvents.
c) Cationic surfactant and insoluble in most of organic solvents.
d) Cationic surfactant and antimalarial.
154. Aspartame is one of the good artificial sweeteners whose use is limited to cold foods and soft drinks because
a) It has very low boiling point
b) It gets dissociated at cooking temperature
c) It is sweetener at low temperature
d) It is insoluble at higher temperatures
155. As ester used as medicine is
a) Ethyl acetate
b) Methyl acetate
c) Methyl salicylate
d) Ethyl benzoate
156. Which of the following does not behave as a surfactant?
a) Soap
b) Detergent
c) Phospholipid
d) Triglycerides
157. Which one is communicable disease?
a) Scurvy
b) Diabetes
c) Beri-beri
d) Cholera
158. Which of the following is an alkaloid?
a) Nicotine
b) Piperine
c) Codeine
d) All of these
159. The first viral disease detected in human being was:
a) Cold
b) Influenza
c) Small pox
d) Yellow fever
160. Which is used for sterilization of water in water supply system of cities?
a) Chlorine
b) Sulphurdioxide
c) Potassium permanganate
d) DDT
161. The name of the organic compound DDT is:
a) Dichloro diphenyl toluene
b) Dichloro diphenyl trichloroethane
c) Diphenyl dichloro trichloroethane
d) Dichloro diphenyl thiosemicarbazide
162. What type of a propellant was used in rocket SLV-3 which was fired by India?
a) Solid propellant
b) Monomethyl hydrazine + Liquid N_2O_4
c) Unsymmetrical dimethyl hydrazine + Liquid N_2O_4
d) Liquid oxygen
163. Aspartame is a non-nutritive sweetener. Assuming that both, amide and ester bonds are hydrolysed in the stomach, the amino acids obtained is
a)  $CH_2CH(NH_2)COOH$
b) $H_2N - CHCH_2COOH$
c) Both (a) and (b)
d) None of these
164. The compounds used to fix a dye to the fabric is known as:
a) Mordant
b) Azeotrope
c) Bleaching agents
d) Lake
165. A substance which can act both as antiseptic and disinfectant is:
a) Aspirin
b) Chloroxylenol
c) Bithional
d) Phenol
166. Pick out the statement which is not true?
a) Tetrazine is harmful edible colour.
b) Alitame is an artificial sweetner.
c) BHT is an antioxidant.
d) Sodium alkyl sulphate is a cationic detergent.
167. Which of the following is used as a local anaesthetic agent?

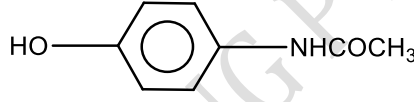
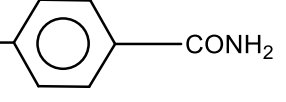
- a) Diazepam b) Procaine c) Mescaline d) Seconal
168. Which of the following could act as a propellant for rockets?
 a) Liquid hydrogen + liquid nitrogen b) Liquid oxygen + liquid argon
 c) Liquid hydrogen + liquid oxygen d) Liquid nitrogen + liquid oxygen
169. Which set has different class of compounds?
 a) Tranquillizers : equanil, heroin, valium
 b) Antiseptic : bithional, dettol, boric acid
 c) Analgesics : naproxen, morphine, aspirin
 d) Bactericidal : Penicillin, aminoglycosides, ofloxacin
170. The preservative which is used to preserve breads and cakes is
 a) Sodium benzoate b) Sodium metabisulphite
 c) Sodiumpropionate d) Sodium sorbate
171. Which of the following is known as invert detergents?
 a) Pentaerythritol monostearate b) Sodium stearyl sulphate
 c) Trimethyl cetyl ammonium bromide d) Ethoxylated non phenol
172. Phenacetin is used as a/an
 a) Antipyretic b) Antiseptic c) Antimalarial d) Disinfectant
173. Select the incorrect statement
 a) Equanil is used to control depression and hypertension
 b) Mifepristone is a synthetic steroid used as "morning after pill"
 c) 0.2 per cent solution of phenol is an antiseptic while its 1.0 per cent solution is a disinfectant
 d) A drug which kills the organism in the body is called bacteriostatic
174. Which of the following represents a biliquid propellant?
 a) Nitroglycerine + nitrocellulose
 b) N_2O_4 + Acrylic rubber
 c) N_2O_4 + Unsymmetrical dimethyl hydrazene
 d) None of the above
175. Barbituric acid and its derivatives are well known
 a) Antipyretics b) Analgesics c) Antiseptics d) Traquillizers
176. Which of the following can possibly be used as analgesis without causing addiction and any modification?
 a) Morphine b) N-acetylparaaminophenol
 c) Diazepam d) Tetrahydrocatenol
177. The rose odour from 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 bacterial disease?
 a) Amoebic dysentery b) Gonorrhoea c) Cholera d) Mumps
179. Further growth of cancerous cells in the body is arrested by
 a) Physiotherapy b) Chemotherapy c) Elelctrotherapy d) Psychotherpy
180. Which of the following is a example of non-biodegradable detergent?
 a) $CH_3-(CH_2)_{11}-\text{C}_6\text{H}_4-\text{SO}_3\text{Na}$
 b) $CH_3-(CH_2)_9-\underset{\text{CH}_3}{\text{CH}}-\text{C}_6\text{H}_4-\text{SO}_3\text{Na}$
 c) $CH_3-\left(\overset{\text{CH}_3}{\text{C}}\text{HCH}_2\right)_7-\overset{\text{CH}_3}{\text{C}}\text{H}-\text{C}_6\text{H}_4-\text{SO}_3\text{Na}$
 d) $CH_3(CH_2)_{10}CH_2OSO_3Na$
181. The insecticide, germicide, gammexane is a formulation for:
 a) DDT
 b) Benzene hexachloride
 c) Hexachlorobenzene
 d) Chloral
182. The structure given below is known as

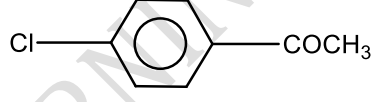


- a) Penicillin-F b) Penicillin-G c) Penicillin-K d) Ampicillin
183. Which of the following is used as an antioxidant in food?
 a) BTX b) BHT c) BHC d) All the three
184. Amoxicillin is semi-synthetic modification of
 a) Penicillin b) Streptomycin c) Tetracycline d) Chloramphenicol
185. 'Placido' is often given to patients. It is:
 a) An antidepressant
 b) A broad spectrum antibiotic
 c) A sugar pill
 d) A tonic
186. Choose the correct statement
 a) Saccharin is 650 times sweeter than sugar b) Aspartame is 550 times sweeter than sugar
 c) Sucralose is 160 times sweeter than sugar d) Alitame is 2000 times sweeter than sugar
187. The pH value of gastric juice in human stomach is about 1.8 and in the small intestine it is about 7.8. The pK_a value of aspirin is 3.5. Aspirin will be
 a) Completely ionized in the small intestine and in the stomach.
 b) Unionized in the small intestine and in the stomach.
 c) Ionized in the small intestine and almost unionized in the stomach.
 d) Ionized in the stomach and almost unionized in the small intestine.
188. Which of the following is a double base propellant?
 a) Methyl nitrate and nitromethane b) Nitroglycerine and nitrocellulose
 c) Kerosene and alcohol d) Acrylic rubber and liquid N_2O_4
189. Which is correct about vanillin?
 a) A flavouring agent having vanilla flavour
 b) *o*-hydroxy-*m*-methoxy benzaldehyde
 c) A food additive
 d) All of the above
190. Indigo shows *cis-trans* isomerism. Which is the stable form of indigo?
 a) *Cis* b) *Trans* c) Either *cis* or *trans* d) Both (a) and (b)
191. The hybrid rocket propellant consists of
 a) Acrylic rubber and liquid nitrogen tetraoxide. b) Polyurethane and ammonium perchlorate.
 c) Nitroglycerine and nitrocellulose. d) Liquid hydrogen and liquid oxygen.
192. 2,4-dichloro phenoxyacetic acid is used as a:
 a) Fungicide b) Insecticide c) Herbicide d) Moth repellent
193. A space rocket is propelled by:
 a) An automobile engine b) Rocket propellant c) Nuclear submarine d) Steam engine
194. Paracetamol is a/an
 a) Antipyretic b) Analgesic c) Both (a) and (b) d) Antimalarial
195. Malachite green is a direct dye for silk and wool. It is prepared by condensing?
 a) Benzaldehyde and dimethyl aniline
 b) Carbonyl chloride and dimethyl aniline
 c) Benzene diazonium chloride with dimethyl aniline
 d) None of the above
196. A large number of antibiotics have been isolated from:
 a) Bacteria actinomycetes
 b) Acids

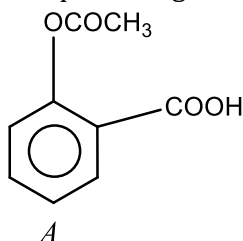
- c) Alkanals
d) Bacteria rhizobium
197. Which of the following is not an analgesic?
a) Ibuprofen
b) Dichlofenac sodium
c) Naproxen
d) Ofloxacin
198. Veronal, a barbiturate drug is used as:
a) Anaesthetic
b) Sedative
c) Antiseptic
d) None of these
199. Amphetamine is used as
a) Anaesthetic
b) Antidepressant
c) Antimalarial
d) Analgesic
200. Which of the following is an artificial edible colour?
a) Saffron
b) Carotene
c) Tetrazine
d) Melamine
201. Which of the following represents a synthetic detergent?
a) $C_{15}H_{31}COOK$
b) $CH_3(CH_2)_6COONa$
c) $C_{12}H_{25}$  SO_3Na
d) All of the above
202. Which of the following is not bacteriostatic antibiotic?
a) Erythromycin
b) Tetracycline
c) Chloramphenicol
d) Penicillin
203. Chemically heroin is
a) Morphine diacetate
b) Morphine monoacetate
c) Morphine dibenzoate
d) Morphine monobenzoate
204. Interferon is:
a) Tonic
b) Virus
c) Carbohydrate
d) Ore of iron
205. Barbituric acid is used as
a) An antipyretic
b) An antiseptic
c) An antibiotic
d) A tranquiliser
206. Sulphaguanidine is used for:
a) Dysentery
b) Urinary infections
c) Antiseptic
d) Antipyretic
207. Sulpha drugs are derivatives of
a) Benzenesulphonic acid
b) Sulphanilic acid
c) Sulphanilamide
d) *p*-aminobenzoic acid
208. A drug that is antipyretic as well as analgesic is
a) Chloroquine
b) Penicillin
c) Paracetamol
d) Chlorpromazine hydrochloride
209. Measles is a disease which belongs to the category of:
a) Bacterial disease
b) Viral disease
c) Venereal disease
d) Protozoan disease
210. For the preparation of a detergent "A" (given below) from benzene, the following steps are involved
- I. $\xrightarrow[\text{HF, Friedel-Craft/s}]{RCH=CH_2}$
II. $\xrightarrow[\text{H}_2\text{SO}_4/\text{SO}_3]{\text{H}_2\text{SO}_4/\text{SO}_3}$
III. $\xrightarrow{\text{NaOH}}$
- 
- (A)
- These steps should be in sequence
a) 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 rocket propellants?
a) Kerosene
b) Nitric acid
c) Liquid oxygen
d) Liquid hydrogen
212. H_2O_2 used in rocket has the concentration
a) 50%
b) 70%
c) 30%
d) 90%
213. Aspirin is obtained by the reaction of CH_3COCl with:
a) Phenol
b) Benzoic acid

- c) Salicylic acid
d) Benzaldehyde
214. Which of the following compounds is used as broad spectrum antibiotics?
a) Ampicillin b) Penicillin G c) Penicillin K d) Tetracycline
215. The detergent which is used as a germicide is
a) Sodium lauryl sulphate b) Cetyltrimethyl ammonium chloride
c) Lauryl alcohol ethoxylate d) Sodium-2-dodecylbenzenesulphonate
216. Antiseptic are different from disinfectants as
a) Antiseptic merely inhibit the growth and disinfectant kill the microorganism
b) Antiseptic are used against microorganism while disinfectants are used against insects
c) Antiseptic are used only over skin while disinfectants can be taken orally also
d) Antiseptic are used over living tissues while disinfectants cannot be used over living tissues
217. A drug effective in the treatment of pneumonia, bronchitis, etc., is:
a) Streptomycin b) Chloramphenicol c) Penicillin d) Sulphaguanidine
218. The correct structure of the drug paracetamol is
- a) 

b) 
- c) 

d) 
219. Phenacetin is used as
a) Antipyretics b) Antiseptics c) Analgesic d) Antimalarials
220. Acetoxybenzoic acid is
a) Antiseptic b) Aspirin c) Antibiotic d) Mordant dye
221. Which one among the following is not an analgesic?
a) Ibuprofen b) Naproxen c) Aspirin d) Valium
222. Streptomycin is effective in the treatment of:
a) Tuberculosis b) Malaria c) Typhoid d) Cholera
223. The drug used to bring down fever are known as
a) Analgesic b) Antibiotic c) Antipyretic d) Sulpha drugs
224. A certain dye was prepared from a plant grown on a large scale in India. Name the dye:
a) Malachite green b) Congo red c) Indigo d) turmeric
225. Which of these is not used as a fuel in the rocket propellants?
a) Liquid He b) Liquid hydrogen c) Kerosene d) Liquid hydrazine
226. Penicillin is a/an
a) Hormone b) Antibiotic c) Antipyretic d) Analgesic
227. Which of the following is used in rocket propellants?
a) $H_2(l)$ b) $O_2(l)$ c) $N_2H_4(l)$ d) All of these
228. The reagent (s) used in the preparation of aspirin from salicylic acid
a) $SOCl_2$, pyridine b) $(CH_3CO)_2O$, H c) CH_3CO_2H , HCl d) CH_3Cl , $AlCl_3$
229. To which class of dyes does phenolphthalein belong?
a) Azo dyes
b) Nitro dyes
c) Triphenyl methane dyes
d) Phthalein dyes
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 fabrics by the vat process
231. Luminal, a barbiturate drug is used as a/an
 a) Antihistamine b) Sedative c) Antiseptic d) Antimalarial
232. Which of the following represents an analgesic?
 a) Equanil b) Quinine c) Novalgin d) All of these
233. Which of the following is an anionic detergent?
 a) $\text{CH}_3(\text{CH}_2)_{16}\text{CH}_2\text{OSO}_3\text{Na}$ b) $\text{CH}_3(\text{CH}_2)_{16}\text{N}^+(\text{CH}_3)_3\text{Cl}^-$
 c) $\text{CH}_3(\text{CH}_2)_{16}\text{COO}(\text{CH}_2\text{CH}_2\text{O})_n\text{CH}_2\text{CH}_2\text{OH}$ d) $\text{C}_6\text{H}_5\text{SO}_3\text{Na}$
234. Aspirin, an antipyretic drug is chemically:
 a) Methyl salicylate
 b) Ethyl salicylate
 c) Acetyl salicylic acid
 d) *o*-hydroxy benzoic acid
235. The group commonly present in synthetic detergents is
 a) HCOONa b) RONa c) RCOONa d) $\text{RC}_6\text{H}_4\text{SO}_3\text{Na}$
236. Oil of winter green and salol are the esters of:
 a) Salicylic acid b) Lactic acid c) Acetic acid d) Sulphanilic acid
237. Compound A given below is



- a) Antiseptic b) Antibiotic c) Analgesic d) Pesticide
238. An anaesthetic is
 a) Procaine b) Chloramphenicol c) *n*-hexyl resorcinol d) Cibazol
239. The functional groups present in 'salol' are
 a) $-\text{NH}_2$ and $-\text{OR}$ b) $-\text{OH}$ and $-\text{COR}$
 c) $-\text{NH}_2$ and $-\text{COOH}$ d) $-\text{OH}$ and $-\text{COOR}$
240. An example of a psychedelic agents is
 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 discovered by
 a) Alexander Fleming b) Tence and Salke c) S.A. Waksman d) Louis Pasteur
243. Tincture of iodine is
 a) Aqueous solution of I_2 b) Solution of I_2 in aqueous KI
 c) Alcoholic solution of I_2 d) Aqueous solution of KI
244. Which detergent can cause maximum pollution?
 a) $\text{CH}_3\text{CH}(\text{C}_4\text{H}_9) - \text{CH}_2\text{CH}_2\text{CH}(\text{C}_4\text{H}_9)(\text{CH}_2)_3\text{CH}(\text{C}_4\text{H}_9)\text{CH}_2\text{CH}_2\text{SO}_3\text{Na}$ b) $\text{CH}_2(\text{CH}_2)_{11}$ -- SO_3Na
 c) - SO_3Na d) Detergents are always pollution free
245. Which among the following is not an antibiotic?
 a) Penicillin b) Oxytocin c) Erythromycin d) Tetracycline
246. Which of the following statements is not true?
 a) Some disinfectants can be used as antiseptic at low concentration
 b) Sulphadiazine is a synthetic antibacterial
 c) Ampicillin is natural antibiotic

d) Aspirin is analgesic and antipyretic both

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CHEMISTRY IN EVERYDAY LIFE

CHEMISTRY

: ANSWER KEY :

1)	a	2)	b	3)	b	4)	d	185)	c	186)	d	187)	c	188)	b
5)	b	6)	b	7)	a	8)	a	189)	d	190)	b	191)	d	192)	c
9)	d	10)	d	11)	b	12)	c	193)	b	194)	a	195)	a	196)	a
13)	c	14)	a	15)	c	16)	a	197)	d	198)	b	199)	b	200)	c
17)	b	18)	d	19)	a	20)	a	201)	c	202)	d	203)	a	204)	b
21)	c	22)	d	23)	c	24)	d	205)	d	206)	a	207)	c	208)	c
25)	d	26)	b	27)	b	28)	c	209)	b	210)	a	211)	b	212)	d
29)	b	30)	a	31)	d	32)	c	213)	c	214)	b	215)	b	216)	d
33)	a	34)	d	35)	a	36)	b	217)	c	218)	b	219)	a	220)	b
37)	b	38)	d	39)	c	40)	c	221)	d	222)	a	223)	c	224)	c
41)	c	42)	c	43)	b	44)	a	225)	a	226)	b	227)	d	228)	b
45)	b	46)	d	47)	b	48)	a	229)	d	230)	c	231)	b	232)	c
49)	b	50)	b	51)	c	52)	b	233)	a	234)	c	235)	d	236)	a
53)	b	54)	c	55)	a	56)	b	237)	c	238)	a	239)	d	240)	b
57)	c	58)	a	59)	a	60)	c	241)	b	242)	a	243)	c	244)	a
61)	a	62)	b	63)	b	64)	a	245)	b	246)	c				
65)	c	66)	b	67)	b	68)	b								
69)	b	70)	d	71)	b	72)	a								
73)	c	74)	b	75)	c	76)	c								
77)	a	78)	c	79)	a	80)	a								
81)	a	82)	c	83)	b	84)	a								
85)	c	86)	c	87)	b	88)	c								
89)	b	90)	d	91)	b	92)	a								
93)	a	94)	d	95)	d	96)	b								
97)	b	98)	c	99)	a	100)	b								
101)	c	102)	d	103)	d	104)	b								
105)	d	106)	d	107)	c	108)	a								
109)	a	110)	b	111)	b	112)	d								
113)	d	114)	c	115)	c	116)	c								
117)	a	118)	b	119)	a	120)	d								
121)	c	122)	c	123)	c	124)	c								
125)	c	126)	c	127)	c	128)	b								
129)	a	130)	c	131)	d	132)	b								
133)	b	134)	b	135)	a	136)	c								
137)	b	138)	b	139)	d	140)	c								
141)	b	142)	b	143)	a	144)	d								
145)	d	146)	d	147)	a	148)	b								
149)	c	150)	c	151)	d	152)	c								
153)	a	154)	b	155)	c	156)	d								
157)	d	158)	d	159)	d	160)	b								
161)	b	162)	a	163)	c	164)	a								
165)	d	166)	d	167)	b	168)	c								
169)	a	170)	c	171)	c	172)	a								
173)	d	174)	c	175)	d	176)	b								
177)	c	178)	c	179)	b	180)	c								
181)	b	182)	b	183)	b	184)	a								

CHEMISTRY IN EVERYDAY LIFE

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).

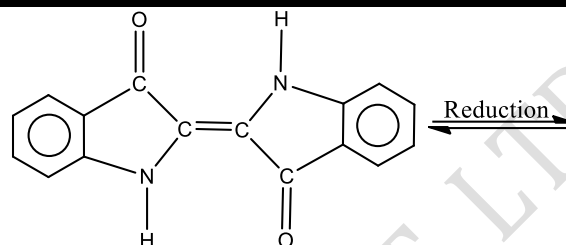
7 **(a)**
Methyl salicylate also known as oil of winter green is used as medicine index in treatment of rheumatic pains and remedy for aches, sprains and bruises.

8 **(a)**
Tranquilizers reduce anxiety and tension. They are also called psychotropic 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.

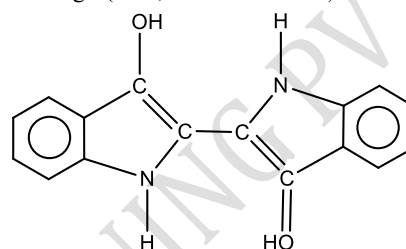
9 **(d)**
Methyl orange is yellow in alkaline medium and red in acid medium.

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.*,



indigo (blue, water insoluble)



indigo (white leuco insoluble)

14 **(a)**
Follow text.

15 **(c)**
Follow text

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_4 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 $\text{Pt}(\text{NH}_3)_2\text{Cl}_2$ 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)

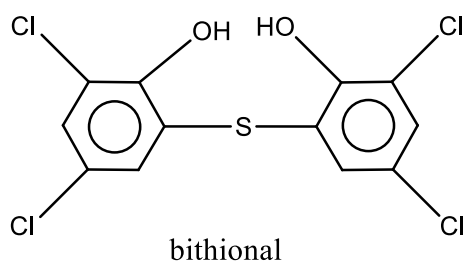
Group ($-\text{COO}^-$) at one end and on other end, it has Na^+ ions, thus cationic micelle is formed. Sodium acetate forms cationic micelles above a certain concentration. In the molecule of detergents and soap, the negative ions aggregate to form a micelle of colloidal size. In polar medium (like 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)

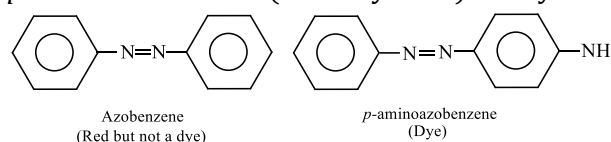
Hybrid propellants these are the propellants which consists of solid fuel and a liquid oxidizer. For example, liquid N_2O_4 (liquid oxidizer) and acrylic rubber (solid fuel).

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 $-\text{OH}$, $-\text{COOH}$, $-\text{SO}_3\text{H}$, $-\text{NH}_2$, $-\text{NHR}$, $-\text{NR}_2$.

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 γ -isomer of BHC.

36 (b)

It was MIC or methyl isocyanate.

38 (d)

Dettol (antiseptic) is a mixture of 4.8% chloroxyleneol + 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 antihistamine 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 $\text{CH}_3(\text{CH}_2)_{14}\text{CH}_2\text{NH}_2$ 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_4 and some dyes such as chloramine-T, methylene blue, gentian violet.

49 (b)

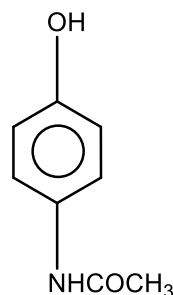
Acetyl salicylic acid is also called acetoxy benzoic acid (aspirin).

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 psychotropic 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



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

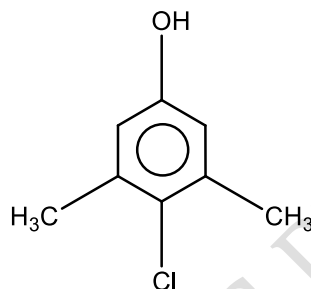
- 71 **(b)**
Dyes are the natural or synthetic chemicals used to impart colour to fabrics, plastics, paper, etc. including food items for their pleasant appearance. Alizarin (orange-red) is extracted from the root of madder plant; also synthesised now-a-days.
- 73 **(c)**
It ($C_{17}H_{21}O_4N$) is an 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).
-
- salicylic acid + CH_3COCl → acetyl salicylic acid (aspirin) + HCl
- 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.
- $$\begin{array}{ccc} 4CH_4NHNH_2 & + & 5N_2O_4 & \longrightarrow \\ \text{Methyl hydrazine} & & \text{Dinitrogen tetraoxide} & \\ 4CO_2 + 9N_2 + 12H_2O & & & \\ N_2H_4 + O_2 & \longrightarrow & N_2 + 2H_2O; \Delta H = -\text{Heat} & \end{array}$$
- 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 percent 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.

94 (d)

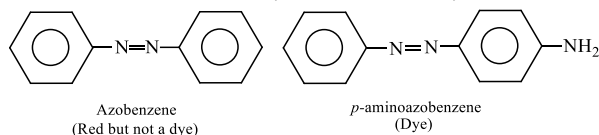


It is main constituent of dettol, which is an alcoholic solution of it.

- 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 M and 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, —SO₃H, —NH₂, —NHR, —NR₂.

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)

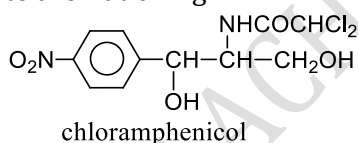
Broad spectrum antibiotics are effective against several different type of bacteria, e.g., chlorophenicol is rapidly absorbed from the gastrointestinal tract and hence can be given orally in case of typhoid, dysentery, Acute fever, certain form of urinary infections, meningitis and pneumonia

111 (b)

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

113 (d)

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



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., C₁₇H₃₅COOK (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.

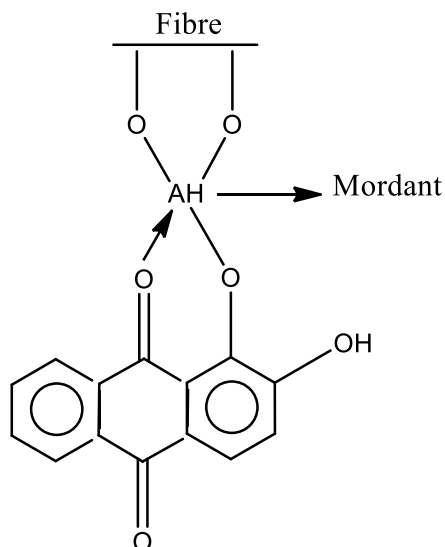
136 (c)

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 psychotropic 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)

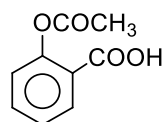
The anaesthetics produce temporary insensibility to the vital function of all types of cells, specially of nervous systems and are used during surgical operations. These are classified as (i) General anaesthetic : producing unconsciousness all over the body, e. g., N_2O , cyclopropane, sodium pentothal, 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)

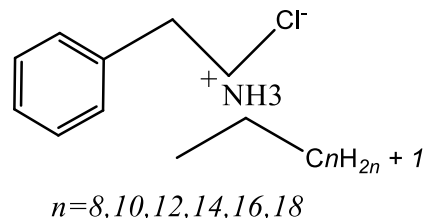
It is based on Newton's third law.

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_2 acts as oxidant.

161 (b)

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

Trans form of indigo is more stable.

191 (d)

Sr²⁺ – red

Mg²⁺ – violet

Al²⁺ – pink

Ba²⁺ – 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.

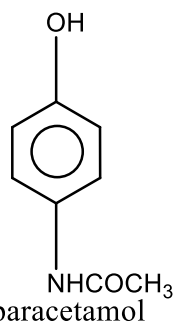
207 (c)

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 widely used as an antipyretic as well as analgesic.



paracetamol
(4-hydroxyacetanilide)

209 (b)

It is a fact.

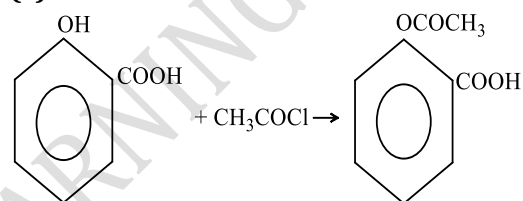
211 (b)

Nitric acid is used as oxidiser in rocket fuel.

212 (d)

H₂O₂ is used as an oxidant for rocket fuel and has 90% concentration to be used in rockets.

213 (c)



This is acetyl salicylic acid.

214 (b)

Penicillin G is widely used as broad spectrum antibiotics.

215 (b)

Cationic detergents are used as germicides. Cationic detergents are usually quaternary ammonium salts. Thus, cetyltrimethyl ammonium 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)

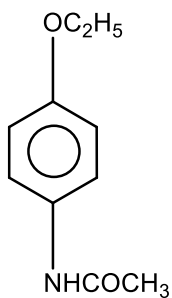
Penicillin is an effective medicine for pneumonia disease.

218 (b)

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

219 (a)

Phenacetin is used as antipyretics.



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)

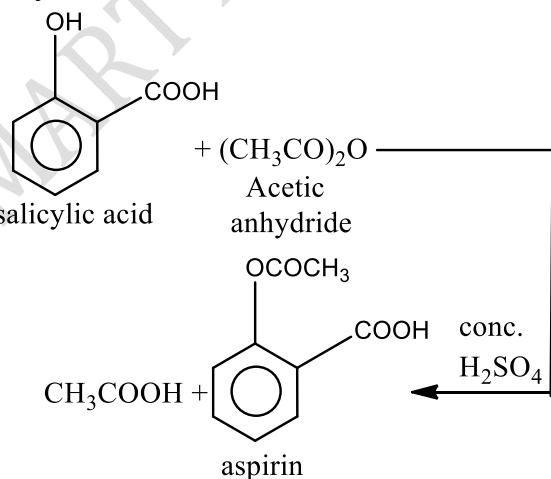
Follow text.

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 .



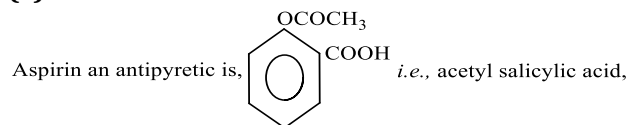
229 (d)

It belongs to phthalein dyes.

230 (c)

Indigo is a dark blue solid insoluble in water.

234 (c)



i.e., a drug which is responsible for lowering the temperature of feverish organism to normal.

Other antipyretic drugs are paracetamol, phenacetin.

236 (a)

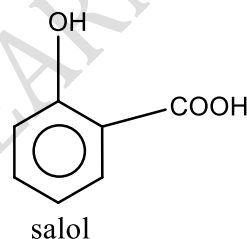
Phenyl salicylate is salol; methyl salicylate, etc.,

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 $-COOR$. Salol is phenyl salicylate. Its structure is as



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 non-biodegradability of a detergent. A non-biodegradable 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.