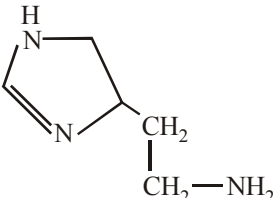
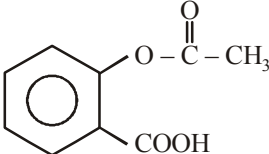


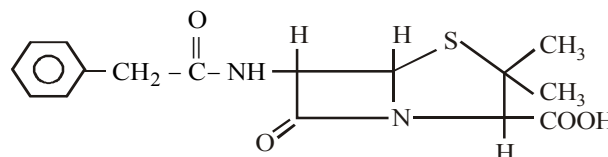
CHEMISTRY IN EVERYDAY LIFE

FACT/DEFINITION TYPE QUESTIONS

- The use of chemicals for treatment of diseases is called as
 - isothermotherapy
 - angiotherapy
 - physiotherapy
 - chemotherapy
- Which of the following statements is not true about enzyme inhibitors?
 - Inhibit the catalytic activity of the enzyme.
 - Prevent the binding of substrate.
 - Generally a strong covalent bond is formed between an inhibitor and an enzyme
 - Inhibitors can be competitive or non-competitive.
- Which of the following is not a target molecule for drug function in body?
 - Carbohydrates
 - Lipids
 - Vitamins
 - Proteins
- Which of the following compounds are administered as antacids?
 - Sodium carbonate
 - Sodium hydrogencarbonate
 - Aluminium carbonate
 - Magnesium hydroxide
 - (i) and (ii)
 - (ii) and (iv)
 - (i), (ii) and (iii)
 - All of these
- The drug  is used as
 - Antacid
 - Analgesic
 - Antimicrobial
 - Antiseptic
- The function of enzymes in the living system is to
 - transport oxygen
 - provide energy
 - provide immunity
 - catalyse biochemical reactions
- Which one of the following is employed as a tranquilizer?
 - Naproxen
 - Tetracycline
 - Chlorpheniramine
 - Equanil
- Which one of the following is employed as a tranquilizer drug?
 - Promethazine
 - Valium
 - Naproxen
 - Mifepristone
- Terfenadine is commonly used as a/an
 - tranquilizer
 - antihistamine
 - antimicrobial
 - antibiotic
- Which one of the following is not a tranquilizer?
 - Equanil
 - Veronal
 - Salvarsan
 - Serotonin
- Tranquillizers are substances used for the treatment of
 - cancer
 - AIDS
 - mental diseases
 - physical disorders
- Which one of the following is employed as a tranquilizer drug?
 - Promethazine
 - Valium
 - Naproxen
 - Mifepristone
- Which of the following drugs is a tranquilizer and sedative
 - Sulphadiazine
 - Papaverine
 - Equanil
 - Mescaline
- Drug which helps to reduce anxiety and brings about calmness is
 - tranquillizer
 - diuretic
 - analgesic
 - antihistamine
- The drug used as an antidepressant is
 - Luminol
 - Tofranil
 - Mescaline
 - Sulphadiazine
- Barbituric acid and its derivatives are well known
 - antipyretics
 - analgesics
 - antiseptics
 - traquillizers
- Which of the following is a hypnotic drug?
 - luminal
 - salol
 - catechol
 - chemisol
- Which of the following is used for inducing sleep?
 - Paracetamol
 - Chloroquine
 - Bithional
 - Barbituric acid derivatives
- Aspirin is
 - antibiotic
 - antipyretic
 - sedative
 - psychedelic

20. An antipyretic is
 (a) quinine (b) paracetamol
 (c) luminal (d) piperazine
21. The following compound is used as
- 
- (a) an anti-inflammatory compound
 (b) analgesic
 (c) hypnotic
 (d) antiseptic
22. Barbituric acid and its derivatives are well known
 (a) antipyretics (b) analgesics
 (c) antiseptics (d) tranquillizers
23. The drug used for prevention of heart attacks is
 (a) aspirin (b) valium
 (c) chloramphenicol (d) cephalosporin
24. Sulpha drugs are used for
 (a) precipitating bacteria
 (b) removing bacteria
 (c) decreasing the size of bacteria
 (d) stopping the growth of bacteria
25. Aspirin falls under which class of drugs?
 (a) Analgesic (b) Antibiotic
 (c) Antifertility (d) antacid
26. Which of the following term means pain killer
 (a) Antibiotic (b) Analgesic
 (c) Antipyretic (d) Penicillin
27. Which one of the following can possibly be used as analgesic without causing addiction and mood modification?
 (a) Diazepam
 (b) Morphine
 (c) N-Acetyl-para-aminophenol
 (d) Tetrahydrocannabinol
28. Aspirin is known as
 (a) acetyl salicylic acid (b) phenyl salicylate
 (c) acetyl salicylate (d) methyl salicylic acid
29. Which one among the following is not an analgesic?
 (a) Ibuprofen (b) Naproxen
 (c) Aspirin (d) Valium
30. Which of the following statements about aspirin is **not** true?
 (a) It is effective in relieving pain.
 (b) It is a neurologically active drug.
 (c) It has antiblood clotting action.
 (d) It belongs to narcotic analgesics.
31. Salol can be used as
 (a) antiseptic (b) antipyretic
 (c) analgesic (d) None of these
32. Various phenol derivatives, tincture of iodine (2–3%) I₂ in (water / alcohol) and some dyes like methylene blue are
 (a) antiseptics (b) disinfectants
 (c) analgesics (d) antipyretics

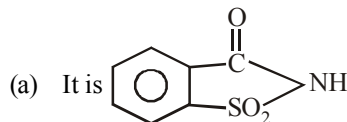
33. Sulpha drugs are used for
 (a) precipitating bacteria
 (b) removing bacteria
 (c) decreasing the size of bacteria
 (d) stopping the growth of bacteria
34. Streptomycin is effective in the treatment of
 (a) tuberculosis (b) malaria
 (c) typhoid (d) cholera
35. An antibiotic with a broad spectrum
 (a) kills the antibodies
 (b) acts on a specific antigen
 (c) acts on different antigens
 (d) acts on both the antigens and antibodies
36. Which of the following is not an antiseptic drug?
 (a) Iodoform (b) Dettol
 (c) Gammexane (d) Genation violet
37. Penicillin was first discovered by
 (a) A. Fleming (b) Tence and Salke
 (c) S.A. Waksna (d) Lewis Pasteur
38. Veronal, a barbiturate drug is used as
 (a) anaesthetic (b) sedative
 (c) antiseptic (d) None of these
39. A drug effective in the treatment of pneumonia, bronchitis, etc, is
 (a) streptomycin (b) chloramphenicol
 (c) penicillin (d) sulphaguanidine
40. Commonly used antiseptic 'Dettol' is a mixture of
 (a) *o*-chlorophenoxylenol + terpeneol
 (b) *o*-cresol + terpeneol
 (c) phenol + terpeneol
 (d) chloroxylenol + terpeneol
41. Chloroamphenicol is an :
 (a) antifertility drug
 (b) antihistaminic
 (c) antiseptic and disinfectant
 (d) antibiotic-broad spectrum
42. The drug which is effective in curing malaria is
 (a) quinine (b) aspirin
 (c) analgin (d) equanil
43. An antibiotic contains nitro group attached to aromatic nucleus. It is
 (a) penicillin (b) streptomycin
 (c) tetracycline (d) chloramphenicol
44. The structure given below is known as



- (a) Penicillin F (b) Penicillin G
 (c) Penicillin K (d) Ampicillin

45. Arsenic drugs are mainly used in the treatment of
(a) Jaundice (b) Typhoid
(c) Syphilis (d) Cholera
46. Bithional is an example of
(a) disinfectant (b) antiseptic
(c) antibiotic (d) analgesic
47. Penicillin is an :
(a) antibiotic (b) anaesthetic
(c) antiseptic (d) antipyretic
48. Which of the following is a broad spectrum drug?
(a) Plasmoquine (b) Chloroquine
(c) Chloramphenicol (d) D.D.T.
49. Bithional is added to soap as an additive to function as a/an
(a) softener (b) hardener
(c) dryer (d) antiseptic
50. Antiseptics and disinfectants either kill or prevent growth of microorganisms. Identify which of the following statements **is not true**:
(a) Chlorine and iodine are used as strong disinfectants.
(b) Dilute solutions of boric acid and hydrogen Peroxide are strong antiseptics.
(c) Disinfectants harm the living tissues.
(d) A 0.2% solution of phenol is an antiseptic while 1% solution acts as a disinfectant.
51. Arsenic containing medicine used for the treatment of syphilis, is
(a) erythromycin (b) ofloxacin
(c) tetracycline (d) salvarsan
52. Novestrol is an
(a) antibiotic (b) analgesic
(c) antacid (d) antifertility drug
53. Which is the correct statement about birth control pills?
(a) Contain estrogen only
(b) Contain progesterone only
(c) Contain a mixture of estrogen and progesterone derivatives.
(d) Progesterone enhances ovulation.
54. Compounds with antiseptic properties are _____
(i) CHCl_3
(ii) CHI_3
(iii) Boric acid
(iv) 0.3 ppm aqueous solution of Cl_2
(a) (i) and (ii) (b) (ii) and (iii)
(c) (i) and (iv) (d) (i) and (iii)
55. Which of the following is not a function of aspirin?
(a) Relief from arthritic pain
(b) Relief from postoperative pain.
(c) Prevents platelet coagulation.
(d) Prevention of heart attacks.
56. Which of the following method of classification of drugs is useful for doctors?
(a) On the basis of drug action.
(b) On the basis of chemical structure.
(c) On the basis of molecular targets.
(d) On the basis of pharmacological effect.
57. Which of the following method of classification of drugs is useful for medicinal chemists?
(a) On the basis of molecular targets.
(b) On the basis of chemical structure.
(c) On the basis of drug action.
(d) All of these.
58. Which of the following statements is true about the catalytic activity of enzyme?
(a) Enzyme holds the substrate for a biochemical reaction.
(b) Enzyme binds substrate through a variety of interactions such as ionic bonding, hydrogen bonding, van der Waal's interaction or dipole – dipole interaction.
(c) Enzyme provides functional group that will attack the substrate and carry out biochemical reaction.
(d) All of the above.
59. Drug tegamet is used as
(a) Antacid (b) Antimalarial
(c) Analgesic (d) Antiseptic
60. Which of the following is an essential component of sleeping pills?
(a) Analgesics (b) Tranquilizers
(c) Antihistamines (d) Both (b) and (c)
61. Which type of drugs inhibit the enzymes which catalyse the degradation of noradrenaline?
(a) Narcotic analgesics (b) Antacids
(c) Antidepressant (d) Non-narcotic analgesic.
62. Which of the following is/are example(s) of narcotic analgesics?
(a) Morphine (b) Heroin
(c) Codeine (d) All of these
63. Which of the following was the first effective treatment discovered for syphilis?
(a) Penicillin (b) Arsphenamine
(c) Chloramphenicol (d) Sulphanilamide
64. Which of the following is an example of narrow spectrum antibiotic?
(a) Chloramphenicol (b) Penicillin G
(c) Ampicillin (d) Ofloxacin
65. Antibiotic that can be given orally in case of typhoid, acute fever, dysentery, meningitis and pneumonia is _____.
(a) vancomycin (b) salvarsan
(c) ofloxacin (d) chloramphenicol
66. Veronal and luminal are derivatives of barbituric acid which are _____.
(i) Tranquilizers
(ii) Non-narcotic analgesic.
(iii) Antiallergic drug
(iv) Neurologically active drug.
(a) (i) and (iv) (b) (i) and (iii)
(c) (ii) and (iii) (d) (i) only

67. Which is correct about saccharin?



- (b) It is 600 times sweeter than sugar
(c) It is used as sweetening agent
(d) All of these

68. Which of the following acts as an antioxidant in edible oils

- (a) Vitamin B (b) Vitamin C
(c) Vitamin D (d) Vitamin E

69. Salts of sorbic acid and propionic acid are used as

- (a) antioxidants (b) flavouring agents
(c) food preservatives (d) nutritional supplements

70. Which of the following add nutritive value to food?

- (a) Sweeteners (b) Antioxidants
(c) Fat emulsifiers (d) None of these

71. Arrange the following artificial sweeteners in increasing order of their sweetness value?

- (a) Sucralose < Saccharin < Alitame < Aspartame
(b) Aspartame < Saccharin < Sucralose < Alitame
(c) Aspartame < Sucralose < Saccharine < Alitame
(d) Saccharine < Aspartame < Sucralose < Alitame

72. Which of the following artificial sweetener does not provide calories?

- (a) Alitame (b) Aspartame
(c) Sucralose (d) Both (b) and (c)

73. Sodium benzoate is used as

- (a) food preservative (b) analgesic
(c) filler in detergents (d) antiseptic

74. Structurally biodegradable detergent should contain

- (a) normal alkyl chain (b) branched alkyl chain
(c) phenyl side chain (d) cyclohexyl side chain

75. Detergents are prepared by the action of H_2SO_4 on which of the following?

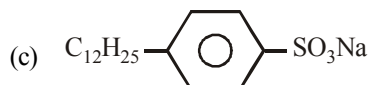
- (a) Cholesterol (b) Lauryl alcohol
(c) Cyclohexanol (d) *p*-Nitrophenol

76. Sodium alkyl benzene sulphonate is used as

- (a) soap (b) fertilizers
(c) pesticides (d) detergents

77. Which of the following represents a synthetic detergent?

- (a) $\text{C}_{15}\text{H}_{31}\text{COOK}$
(b) $\text{CH}_3[\text{CH}_2]_{16}\text{COONa}$



- (d) None of these

78. Which of the following represents soap

- (a) $\text{C}_{17}\text{H}_{35}\text{COOK}$ (b) $\text{C}_{17}\text{H}_{35}\text{COOH}$
(c) $\text{C}_{15}\text{H}_{31}\text{COOH}$ (d) $(\text{C}_{17}\text{H}_{35}\text{COO})_2\text{Ca}$

79. Alkaline hydrolysis of esters is known as :

- (a) Esterification (b) Saponification
(c) dehydration (d) alkalination

80. Commercial detergent contains mainly

- (a) RCOONa (b) RONa
(c) RSNa (d) RSO_3Na

81. Washing soap can be prepared by saponification with alkali of which of the following oil

- (a) Rose oil (b) Paraffin oil
(c) Groundnut oil (d) Kerosene oil

82. Palmitic acid and stearic acid are used as :

- (a) medicine (b) soap
(c) antiseptic cream (d) pickle

83. Soaps can be classified as :

- (a) esters (b) salts of fatty acids
(c) alcohols (d) phenols

84. Cetyltrimethyl ammonium bromide is a popular

- (a) anionic detergent (b) cationic detergent
(c) non-ionic detergent (d) sweetener

85. The cationic detergent that is used in hair conditioners is

- (a) sodium dodecylbenzene sulphonate
(b) sodium lauryl sulphate
(c) tetramethyl ammonium chloride
(d) cetyltrimethyl ammonium bromide

86. Which of the following enhances leathering property of soap?

- (a) Sodium carbonate (b) Sodium rosinate
(c) Sodium stearate (d) Trisodium phosphate

87. Polyethyleneglycols are used in the preparation of which type of detergents?

- (a) Cationic detergents (b) Anionic detergents
(c) Non-ionic detergents (d) Soaps

88. Which of the following are anionic detergents?

- (i) Sodium salts of sulphonated long chain alcohol.
(ii) Ester of stearic acid and polyethylene glycol.
(iii) Quarternary ammonium salt of amine with acetate ion.
(iv) Sodium salts of sulphonated long chain hydrocarbons.
(a) (i) and (iv) (b) (ii) and (iii)
(c) (iii) and (iv) (d) (i), (ii) and (iv)

89. Which type of detergent is formed when stearic acid reacts with polyethylene glycol?

- (a) Cationic detergent (b) Anionic detergent
(c) Non-ionic detergent (d) None of these

90. Glycerol is added to soap. It functions _____

- (a) as a filler.
(b) to increase leathering.
(c) to prevent rapid drying.
(d) to make soap granules.

STATEMENT TYPE QUESTIONS

91. Which of the following statements are incorrect about receptor proteins?

- (i) Majority of receptor proteins are embedded in the cell membranes.
(ii) The active site of receptor proteins opens on the inside region of the cell.
(iii) Chemical messengers are received at the binding sites of receptor proteins.
(iv) Shape of receptor doesn't change during attachment of messenger.
(a) (i), (ii) and (iii) (b) (ii) and (iv)
(c) (ii), (iii) and (iv) (d) (i) and (iv)

92. Which of the following statements are incorrect about penicillin?

- (i) An antibacterial medicine.
- (ii) Ampicillin is its synthetic modification.
- (iii) It has bacteriostatic effect.
- (iv) It is a broad spectrum antibiotic.

- (a) (i) and (ii) (b) (ii) and (iv)
- (c) (iii) and (iv) (d) (i) and (ii)

93. Which of the following statements are correct?

- (i) Before 1970 for treatment of stomach acidity $\text{Al}(\text{OH})_3$ is a better antacid in comparison to NaHCO_3 .
- (ii) Discovery of cimetidine was a major break through in the treatment of hyperacidity.
- (iii) Terfenadine is a drug which competes with histamine for binding sites of receptor.
- (iv) Antidepressant drugs like equanil inhibit the enzymes which catalyze the degradation of noradrenaline.
- (v) Veronal and luminal belongs to the class of tranquilizers called barbiturates.

- (a) (i), (ii) and (iii) (b) (i), (iii) and (v)
- (c) (ii), (iii) and (iv) (d) (ii), (iv) and (v)

94. Consider the following statements.

- (i) Antiseptics are not ingested like antibiotics.
- (ii) 1% solution of iodine in alcohol–water mixture is known as tincture of iodine.
- (iii) SO_2 in low concentrations are used as antiseptics whereas in higher concentration are used as disinfectants.
- (iv) Birth control pills essentially contain a mixture of synthetic estrogen and progesterone derivatives.

Which of the following is the correct code for the statements above ?

- (a) FTFT (b) TTTF
- (c) TTFT (d) FFTT

95. Which of the following statements are correct?

- (i) Cationic detergents have germicidal properties
- (ii) Bacteria can degrade the detergents containing highly branched chains.
- (iii) Some synthetic detergents can give foam even in ice cold water.
- (iv) Synthetic detergents are not soaps.

- (a) (i), (ii) and (iii) (b) (i), (iii) and (iv)
- (c) (ii), (iii) and (iv) (d) (iii) and (iv)

96. Consider the following statements.

- (i) Potassium soaps are soft to the skin than sodium soaps.
- (ii) Shaving soaps contain ethanol to prevent rapid drying.
- (iii) Builders like Na_2CO_3 and Na_3PO_4 make soaps act more rapidly.
- (iv) Hard water contains Ca^{2+} and Mg^{2+} ions which forms insoluble Ca^{2+} and Mg^{2+} soaps separates out as scum.

Which of the following is the correct code for the statements above ?

- (a) TFFT (b) FTTT
- (c) FTFT (d) TTTT

97. Which of the following statements are correct?

- (i) Detergents give foam easily even in hard water.
- (ii) Anionic detergents are used in toothpastes.
- (iii) Cationic detergents being inexpensive are extensively used as germicide.
- (iv) Detergents with linear alkyl chains are more polluting as compared to detergents having branched alkyl chains.

Which of the following is the correct code for the statements above?

- (a) TFFT (b) TTFT
- (c) FFTT (d) TTFF

MATCHING TYPE QUESTIONS

98. Match the columns

Column-I

- (A) Sodium Perborate
- (B) Chlorine
- (C) Bithional
- (D) Potassium stearate

Column-II

- (p) Disinfectant
- (q) Antiseptic
- (r) Milk bleaching agent
- (s) Soap

- (a) A – (p), B – (q), C – (r), D – (s)
- (b) A – (q), B – (r), C – (s), D – (p)
- (c) A – (r), B – (p), C – (q), D – (s)
- (d) A – (s), B – (p), C – (q), D – (r)

99. Match the columns

Column-I

- (A) Ranitidine
- (B) Furacine
- (C) Phenelzine
- (D) Chloramphenicol

Column-II

- (p) Tranquilizer
- (q) Antibiotic
- (r) Antihistamine
- (s) Antiseptic

- (a) A – (r), B – (s), C – (p), D – (q)
- (b) A – (s), B – (p), C – (q), D – (r)
- (c) A – (p), B – (q), C – (r), D – (s)
- (d) A – (q), B – (r), C – (s), D – (p)

100. Match the columns

Column – I

- (A) First antibacterial drug
- (B) Protosil
- (C) Chloramphenicol
- (D) Ofloxacin

Column – II

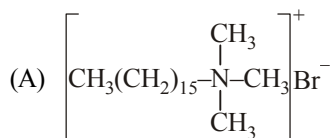
- (p) Broad spectrum antibiotic
- (q) Arsphenamine
- (r) 1932
- (s) 1947

- (a) A – (q), B – (r), C – (p, s), D – (p)
- (b) A – (r), B – (q), C – (p, s), D – (p)
- (c) A – (q), B – (p, s), C – (r), D – (p)
- (d) A – (p), B – (r), C – (p, s), D – (q)

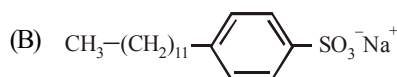
101. Match the columns

Column-I

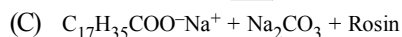
Column-II



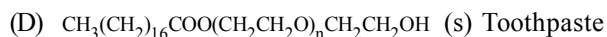
(p) Dishwashing powder



(q) Laundry soap



(r) Hair conditioners



(s) Toothpaste

(a) A – (p), B – (q), C – (r), D – (s)

(b) A – (q), B – (r), C – (p), D – (s)

(c) A – (r), B – (s), C – (q), D – (p)

(d) A – (p), B – (r), C – (q), D – (s)

102. Match the columns

Column-I

Column-II

(A) Toilet soap

(p) Made by beating tiny air bubbles before their hardening.

(B) Transparent soap

(q) Contain glycerol to prevent rapid drying.

(C) Shaving soaps

(r) Prepared by using better grades of fats and oils.

(D) Soaps that float in water

(s) Made by dissolving the soap in ethanol and then evaporating excess alkali.

(a) A – (s), B – (p), C – (q), D – (r)

(b) A – (r), B – (s), C – (q), D – (p)

(c) A – (r), B – (q), C – (p), D – (s)

(d) A – (q), B – (s), C – (p), D – (r)

ASSERTION-REASON TYPE QUESTIONS

Directions : Each of these questions contain two statements, Assertion and Reason. Each of these questions also has four alternative choices, only one of which is the correct answer. You have to select one of the codes (a), (b), (c) and (d) given below.

- (a) Assertion is correct, reason is correct; reason is a correct explanation for assertion.
 (b) Assertion is correct, reason is correct; reason is not a correct explanation for assertion
 (c) Assertion is correct, reason is incorrect
 (d) Assertion is incorrect, reason is correct.

103. Assertion : The drugs which act on the central nervous system and help in reducing anxiety are called antibiotics.

Reason : Pencillin is an antibiotic.

104. Assertion : Equanil is a tranquilizer.

Reason : Equanil is used to cure depression and hypertension.

105. Assertion : Tetracycline is a broad spectrum antibiotic.

Reason : Tetracycline is effective against a number of types of bacteria, large viruses and typhus fever.

106. Assertion : Antiseptics are applied to living tissues.

Reason : Iodine is a powerful antiseptic.

107. Assertion : Sedatives are given to patients who are mentally agitated and violent.

Reason : Sedatives are used to suppress the activities of central nervous system.

108. Assertion : Non-competitive inhibitor inhibits the catalytic activity of enzyme by binding with its active site.

Reason : Non-competitive inhibitor changes the shape of the active site in such a way that substrate can't recognise it.

109. Assertion : Sodium chloride is added to precipitate soap after saponification.

Reason : Hydrolysis of esters of long chain fatty acids by alkali produces soap in colloidal form.

CRITICAL THINKING TYPE QUESTIONS

110. Which of the following are sulpha drugs?

- (i) Sulphapyridine (ii) Prontosil
 (iii) Salvarsan (iv) Nardil
 (a) (i) and (ii) (b) (ii) and (iv)
 (c) (i), (ii) and (iv) (d) (ii), (iii) and (iv)

111. Among the following antihistamines, which are antacids

- (i) Ranitidine (ii) Brompheniramine
 (iii) Terfenadine (iv) Cimetidine
 (a) (i) and (iii) (b) (i), (ii) and (iv)
 (c) (i) and (iv) (d) (ii) and (iii)

112. Which one of the following is an antihistamine?

- (a) Iproniazid (b) Salvarsan
 (c) Zantac (d) Chloramphenicol

113. Morphine is

- (a) an alkaloid (b) an enzyme
 (c) a carbohydrate (d) a protein

114. H_1 – Receptor antagonists is a term associated with :

- (a) Antiseptics (b) Antihistamins
 (c) Antacids (d) Analgesics

115. Amoxillin is semi-synthetic modification of

- (a) penicillin (b) streptomycin
 (c) tetracycline (d) chloramphenicol

116. Which of the following is used as an antibiotic ?

- (a) Ciprofloxacin (b) Paracetamol
 (c) Ibuprofen (d) Tocopherol

117. Select the incorrect statement.

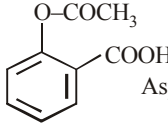
- (a) Equanil is used to control depression and hypertension.
 (b) Mifepristone is a synthetic steroid used as “morning after pill”.
 (c) 0.2 percent solution of phenol is an antiseptic while its 1.0 percent solution is a disinfectant.
 (d) A drug which kills the organism in the body is called bacteriostatic.

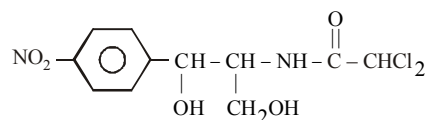
118. A large number of antibiotics have been isolated from
 (a) Bacteria actinomycetes
 (b) Acids
 (c) Alkanals
 (d) Bacteria rhizobium
119. Antiseptic chloroxylenol is
 (a) 4-chloro-3, 5-dimethylphenol
 (b) 3-chloro-4, 5-dimethylphenol
 (c) 4-chloro-2, 5-dimethylphenol
 (d) 5-chloro-3, 4-dimethylphenol
120. Which of the following is not correctly matched?
 (i) Proteins that are crucial to body's communication process. – Receptors
 (ii) Drugs that mimic the natural messenger by switching on the receptor. – Antagonists
 (iii) Drugs that binds to the receptor site and inhibit its natural function. – Agonists
 (a) (ii) only (b) (iii) only
 (c) (i) and (iii) (d) (ii) and (iii)
121. Which of the following drug inhibits the synthesis of chemicals known as prostaglandins which stimulate inflammation in tissue and cause pain?
 (a) Barbiturates (b) Aspirin
 (c) Seldane (d) Iproniazid
122. Bactericidal antibiotics are those which
 (a) have inhibitory effect on microbes.
 (b) have killing effect on microbes.
 (c) have both inhibitory and killing effect on microbes.
 (d) intervene in metabolic process of microorganism.
123. Which of the following antibiotics is not correctly classified?
- | Bactericidal | Bacteriostatic |
|---------------------|----------------|
| (A) Penicillin | Erythromycin |
| (B) Aminoglycosides | Tetracycline |
| (C) Chloramphenicol | Ofloxacin |
| (a) A and B | (b) C only |
| (c) B and C | (d) B only |
124. Antibiotics that are effective mainly against Gram-positive or Gram-negative bacteria X. Antibiotics that are effective against a single organism or disease are Y
 What is X and Y ?
 (a) X = Broad spectrum antibiotics.
 Y = Narrow spectrum antibiotics.
 (b) X = Broad spectrum antibiotics.
 Y = Limited spectrum antibiotics.
 (c) X = Narrow spectrum antibiotics.
 Y = Limited spectrum antibiotics.
 (d) X = Narrow spectrum antibiotics.
 Y = Broad spectrum antibiotics.
125. Which of the following is an example of synthetic progesterone derivative which is most widely used as antifertility drug?
 (a) Norethindrone (b) Novestrol
 (c) Ethynylestradiol (d) All of these
126. Substance used for the preservation of coloured fruit juices is
 (a) benzene (b) benzoic acid
 (c) phenol (d) sodium meta bisulphite
127. The artificial sweetener containing chlorine that has the appearance and taste as that of sugar and is stable at cooking temperature is
 (a) Aspartame (b) Saccharin
 (c) Sucrolose (d) Alitame
128. 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
129. Which one of the following is not used as a filler in laundry soaps?
 (a) Sodium silicate (b) Glycerol
 (c) Sodium rosinate (d) Borax
130. Which of the following is an example of liquid dishwashing detergent?
 (a) $\text{CH}_3(\text{CH}_2)_{10}-\text{CH}_2\text{OSO}_3^-\text{Na}^+$
 (b) $\text{C}_9\text{H}_{19}-\text{C}_6\text{H}_4-\text{O}-(\text{CH}_2-\text{CH}_2-\text{O})_5-\text{CH}_2\text{CH}_2\text{OH}$
 (c) $\text{CH}_3-\text{C}_6\text{H}_4-\text{SO}_3^-\text{Na}^+$
 (d) $\left[\text{CH}_3(\text{CH}_2)_{15}-\text{N}(\text{CH}_3)_3 \right]^+\text{Br}^-$
131. Which of the following statements is incorrect?
 (a) Saccharin is about 550 times as sweet as cane sugar.
 (b) Aspartame is used in the manufacture of baked sweets.
 (c) Alitame is more sweet than saccharin and aspartame.
 (d) Sodium benzoate is commonly used preservative.

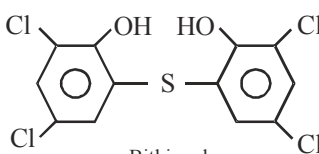
HINTS AND SOLUTIONS

FACT/DEFINITION TYPE QUESTIONS

1. (d) 2. (c) 3. (c) 4. (b)
 5. (a) Given drug is used as Antacid.
 6. (d) The function of enzymes in the living system is to catalyse biochemical reactions which occur in living systems. e.g. invertase, pepsin, amylase.
- $$\begin{array}{ccc} \text{Sucrose} & \xrightarrow{\text{Invertase}} & \text{glucose} + \text{fructose} \\ \text{(polymer)} & & \text{(monomer)} \end{array}$$
- $$\begin{array}{ccc} \text{Starch} & \xrightarrow{\text{amylase}} & \text{glucose} \\ \text{(polymer)} & & \text{(monomer)} \end{array}$$
7. (d) Equanil is an important medicine used in depression and hypertension.
 8. (b)
 9. (b) Terfenadine is commonly used as antihistamine.
 10. (c) Salvarsan is an organoarsenic compound, used in the treatment of syphilis. It was the first modern chemotherapeutic agent.
 11. (c) 12. (b)
 13. (c) Tranquilizers reduce anxiety and tension they are also called psychotropic drugs. These are two types
 - (i) Sedative the drugs used for violent and mentally agitated patient e.g., Equanil and diazepam.
 - (ii) Antidepressant- The drug are used to patients who are highly depressed and lose self confidence e.g. tofranil, imipramine, amphetamine etc.
 14. (a) 15. (b) 16. (d)
 17. (a) These drugs induce sleep and are habit forming common example of hypnotic drugs are Luminal and Saconal.
 18. (d)
 19. (b) Aspirin is antipyretic i.e., a drug which is responsible for lowering the temperature of feverish organism to normal, other antipyretic drugs are Paracetamol, Phenacetin.
 20. (b) Paracetamol is an antipyretic
 21. (b) It is acetyl salicylic acid i.e., aspirin, analgesic and antipyretic.
 22. (d)
 23. (a) Due to anti-blood clotting action of aspirin, it is used to prevent heart attack.
 24. (d) Sulpha drugs (antibacterial and antibiotic) are group of drugs which are derivative of sulphanilamide.
 25. (a) Analgesic are pain killers.
 26. (b) Analgesic means painkiller.
 27. (c) We know that N-acetyl-para-aminophenol (or paracetamol) is an antipyretic which can also be used as an analgesic to relieve pain.

28. (a)  Aspirin (Acetyl salicylic acid)
29. (d) Valium is a tranquilizer and not an analgesic. It is used for treatment of stress, fatigue, mild and severe mental diseases.
30. (d) Aspirin is a non-narcotic analgesic.
31. (a) Salol is phenyl salicylate used as antiseptic.
32. (a) Antiseptic drugs cause destruction of micro-organisms that produce septic disease e.g. Dettol, Savlon, Boric acid, Phenol, Iodoform, KMnO_4 and some dyes such as methylene blue, gentian violet.
33. (d) Sulpha drugs (antibacterial and antibiotic) are a group of drugs which are derivatives of sulphanilamide.
34. (a) It is the very effective antibiotic for tuberculosis.
35. (c) Broad spectrum antibiotics act on different antigens.
36. (c) It is an insecticide.
37. (a) A. Fleming discovered penicillin in 1929.
38. (b)
39. (c) Penicillin is an effective medicine for pneumonia disease.
40. (d) The mixture of chloroxylenol and terpenol is Dettol which is used as antiseptic.
41. (d) Chloramphenicol is a broad spectrum antibiotic.
42. (a) Substances used for the treatment of malaria are antimalarials e.g. Quinine, chloroquine.
43. (d) Chloramphenicol is



44. (b) It is the known structure of Penicillin G
 45. (c) Arsenic drugs are poisonous for syphilis.
 46. (b) Bithional is a well known antiseptic, added in soaps to reduce odours produced by bacterial decomposition of organic matter of skin.
- 
- Bithional
47. (a) Penicillin is an antibiotic.
 48. (c) **Chloramphenicol** is a broad spectrum drug. [Broad spectrum antibiotics are medicines effective against gram positive as well as gram negative bacteria, e.g., tetracycline, chloramphenicol, etc.]

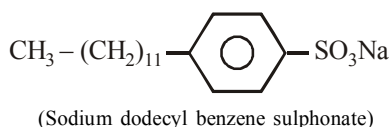
49. (d) Bithional is another well known antiseptic which is added to good quality soaps to reduce the odours produced by bacterial decomposition of organic matter on the skin.
50. (b) Dilute solutions of boric acid and hydrogen peroxide are weak antiseptics.
51. (d)
52. (d) Novestrol is an antifertility drug.
53. (c) 54. (b)
55. (b) Morphine narcotics are chiefly used for the relief of post operative pain.
56. (d) Classification of drugs on the basis of pharmacological effect is useful for doctors because it provides them the whole range of drugs available for the treatment of a particular type of problem.
57. (a) 58. (d)
59. (a) Drug tegamet was designed to prevent the interaction of histamine with the receptors present in the stomach wall. This resulted in release of lesser amount of acid.
60. (b)
61. (c) Antidepressant drugs inhibit the enzymes which catalyse the degradation of noradrenaline.
62. (d)
63. (b) Arsphenamine also known as salvarsan was the first effective treatment discovered for syphilis.
64. (b) Penicillin G has a narrow spectrum, while all other options have broad spectrum.
65. (d) Chloramphenicol is rapidly absorbed from the gastrointestinal tract and hence can be given orally in case of typhoid, acute fever, meningitis, pneumonia etc.
66. (a)
67. (d) All are characteristics of Saccharin.
68. (d) Vitamin E is an antioxidant present in edible oils.
69. (c) Salts of sorbic acid and propionic acid are used as food preservatives because these chemicals inhibit the growth of yeast bacteria or moulds.
70. (d) Neither any of the substances among given options possess nutritive value.
71. (b)

Artificial sweetener	Sweetness value
Aspartame	100
Saccharin	550
Sucralose	600
Alitame	2000
72. (c) Sucralose does not provide calories.
73. (a) Sodium benzoate is used as a food preservative.
74. (b) Structurally biodegradable detergents should contain branched alkyl chain.
75. (b)
76. (d) It is used as detergent.
77. (c) The most widely used domestic detergent is the sodium dodecyl benzene sulphonate (SDS).
78. (a) Soaps are the sodium or potassium salt of higher fatty acids e.g., $C_{17}H_{37}COOK$ (Potassium stearate). These are obtained by alkaline hydrolysis of oils and fats. The reaction is called saponification.
79. (b) Alkaline hydrolysis of esters is known as saponification.
- $R-COOR' + NaOH \longrightarrow R'OH + RCOONa$
80. (d) Commercial detergent are the sodium salts of long chain (linear) alkyl substituted benzene sulphonic acids (LAB) and are most widely used. The most common is *sodium dodecylbenzene sulphate*.
- $CH_3(CH_2)_{10}CH_2 - \text{C}_6\text{H}_4 - SO_2O^-Na^+$
81. (c) Any oils which are good for eating or cooking, can be used in making soap. One of the best is said to be coconut oil. Groundnut, Shea butter, Cocoa butter, Sun flower and many other vegetable oils are also used.
82. (b) Sodium or potassium salts of palmitic acid ($CH_3(CH_2)_{14}COO^-Na^+$) and stearic acid ($CH_3(CH_2)_{16}COO^-Na^+$) are used as soaps.
83. (b) Soaps are actually salts of higher fatty acids.
- Example; $C_{17}H_{35}COONa$
(sodium stearate)
84. (b)
$$\left[CH_3 - (CH_2)_{15} - \overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{N^+}} - CH_3 \right] Br^-$$

cetyl trimethyl ammonium bromide
85. (d) Cetyltrimethyl ammonium bromide possess germicidal properties. Thus it is used as a cationic detergent in hair conditioners.
86. (b) 87. (c) 88. (a)
89. (c) Non-ionic detergent is formed when stearic acid reacts with polyethylene glycol.
90. (c)

STATEMENT TYPE QUESTIONS

91. (b) 92. (c)
93. (b) For statement (ii), drug which brings major change in the treatment of hyperacidity was histamine. For statement (iv), antidepressant drugs like iproniazid and phenelzine inhibit the enzymes which catalyse the degradation of noradrenaline when the enzyme is inhibited, this important neurotransmitter is slowly metabolised and can activate its receptor for longer periods of time, thus counteracting the effect of depression.
94. (c) For statement (ii), 2–3% solution of iodine in alcohol water mixture is known as tincture of iodine. For statement (iii), SO_2 in very low concentrations are used as disinfectants.



95. (b)
 96. (a) Shaving soaps contain glycerol to prevent rapid drying.
 97. (d) For statement (iii), cationic detergents are expensive and thus have limited use. For statement (iv), detergents having unbranched chains can be biodegraded more easily thus are less polluting as compared to detergents having branched chains.

MATCHING TYPE QUESTIONS

98. (c) 99. (a) 100. (a) 101. (c) 102. (b)

ASSERTION-REASON TYPE QUESTIONS

103. (d) The drugs which act on the central nervous system and help in reducing anxiety are called tranquilizers.
 104. (a) Tranquilizers are chemicals which are used to cure mental diseases.
 105. (a) Broad spectrum antibiotics are those medicines which are effective against several different types of harmful micro organisms.
 106. (b) Antiseptics are those chemical which kill or prevent the growth of micro organism. Antiseptics do not harm the living tissues and can be applied on cuts and wounds. They help to reduce odour resulting from the bacterial decomposition in the mouth and on the body.
 107. (a) A small quantity of sedative produces a feeling of relaxation, calmness and drowsiness.
 108. (d) 109. (b)

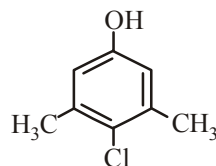
CRITICAL THINKING TYPE QUESTIONS

110. (a) 111. (c)
 112. (c) Iproniazid → Tranquilizer
 Salvarsan → Antimicrobial
 Zantac (ranitidine) → Antihistamine
 Chloramphenicol → Antibiotic
 113. (a) It is an alkaloid, a class of organic compound which is basic in nature and of plant origin containing atleast one nitrogen atom in a ring structure of molecule.
 114. (b) The term “antihistamine” refers only to H_1 antagonists, which is also known as H_1 -receptor antagonists and H_1 -antihistamine.
 115. (a) Amoxillin is semisynthetic modification of Penicillin
 116. (a) Ciprofloxacin is used as antibiotic while paracetamol, ibuprofen and tocopherol are respectively antipyretic, pain killer and Vit. E.

117. (d) Bacteriostatic drugs inhibit the growth of organism while bactericidal drugs kill the microorganisms.

118. (a)

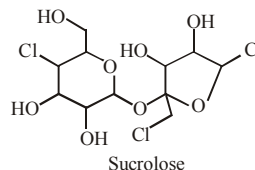
119. (a)



Chloroxylenol

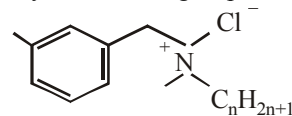
(4-chloro-3, 5-dimethylphenol)

120. (d) Drugs that mimic the natural messenger by switching on the receptor are called agonists. While drugs that binds to the receptor site and inhibit its natural function are called antagonists.
 121. (b)
 122. (b) Bactericidal have killing effect on microbes while bacteriostatic have inhibitory effect on microbes.
 123. (b) Chloramphenicol is bacteriostatic antibiotic while ofloxacin is bactericidal type antibiotic.
 124. (c) Narrow spectrum antibiotics are effective against Gram-positive or Gram-negative bacteria. Limited spectrum antibiotics are effective against a single organism or disease.
 125. (a) Norethindrone is an example of synthetic progesterone derivative most widely used as antifertility drug.
 126. (b) Benzoic acid used as preservative as sodium benzoate.
 127. (c)



Sucrose

128. (a) Benzalkonium chloride, also known as alkyldimethylbenzylammonium chloride is nitrogenous cationic surface active agent belonging to the quaternary ammonium group. It is used as antiseptic.



$n = 8, 10, 12, 14, 16, 18$

129. (b) Laundry soaps contain fillers like sodium rosinate, sodium silicate, borax and sodium carbonate.
 130. (b)
 131. (b) Aspartame cannot be used in baked food as it is unstable at cooking temperature thus its use is limited to cold foods and soft drinks.