CHEMISTRY

BOOKS - CHEMISTRY

CHEMISTRY IN EVERYDAY LIFE

Chemistry In Everyday Life

1. Which of the following statements is not correct ?

A. Some antiseptics can be added to soaps

B. Dilute solutions of some disinfectants can be used as antiseptic

C. Disinfectants are antimicrobial drugs

D. Antiseptic medicines can be ingested

Answer: D

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2. 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

Answer: C

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3. Which statement about aspirin is not true?

A. Aspirin belongs to narcotic analgesics

B. It is effective in relieving pain

C. It has antiblood clotting action

D. It is a neurologically active drug

Answer: A

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4. The most useful classification of drugs form for medicinal chemists is.

A. on the basis of chemical structure

B. on the basis of drug action

C. on the basis of molecular targets

D. on the basis of pharmacological effect

Answer: C

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5. Which of the following statement is not correct ?

A. Some tranquilizers function by inhibiting the enzymes which catalyse the degradation of noradrenaline

B. Tranquiiizers are narcotic drugs

C. Tranquilizers are chemical compounds that do not affect the message transfer fro nerve to receptor.

D. Tranquilizers are chemical compounds that can relieve pain and fever

Answer: A

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6. Salvarsan is arsenic containing drug which was first used for the treatment of._____.

A. syphilis

B. typhoid

C. meningitis

D. dysentry

Answer: A

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7. A narrow spectrum antibiotic is active against

A. grams positive or gram negative bacteria

B. gram negative bacteria only

C. single organism or one disease

D. both gram positive and gram negative bacteria

Answer: A

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8. The compound that causes general antidepressant action on the central nervous system belongs to the class of

A. analgesics

B. tranquiiizers

C. narcotic analgesics

D. antihistamines

Answer: B

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9. Compound which is added to soap to impart antiseptic properties is

A. sodium laurylsulphate

B. sodium dodecylbenzenesulphonate

C. rosin

D. bithional

Answer: D

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10. Equanil is a ..... .

A. artificial sweetener

B. tranquilizer

C. antihistamine

D. antifertility drug

Answer: B

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

A. Sodium carbonate

B. Sodium rosinate

C. Sodium stearate

D. Trisodium phosphate

Answer: B

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12. Glycerol is added to soap. It function:

A. as a filler

B. to increases leathering

C. to prevent rapid drying

D. to make soap granules

Answer: C

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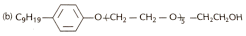
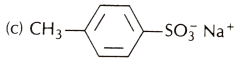
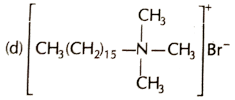
13. Which of the following is an example of liquid dishwasing detergent ?

A. $CH_3(CH_2)_{10} - CH_2OSO_3^- Na^+$

B. 

C. 

D. 

Answer: B

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14. Polyethylene glycols are used in the preparation of which type of detergents?

A. Cationic detergents

B. Anionic detergents

C. Non ionic detergents

D. Soaps

Answer: C

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15. Which of the following hormones does not have a particular target organ in the body?

A. Carbohydrates

B. Lipids

C. Vitamins

D. Protein

Answer: C

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16. Which of the following statements is not true about enzyme inhibitors ?

A. inhibit the catalytic activity of the enzyme

B. Prevent the binding of substrate

C. Generally a strong covalent bond is formed between an inhibitor and an enzyme

D. Inhibitors can be competitive or non-competitive

Answer: C

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17. Which of the following chemicals can be added for sweetening of food item at cooking temperature and does not provide calories?

A. Sucrose

B. Glucose

C. Aspartme

D. Sucralose

Answer: D

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18. Which of the following will not enhance nutritional value of food ?

A. Minerals

B. Artificial sweeteners

C. Vitamins

D. Amino acids.

Answer: B

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

A. Majority of receptor protein are embedded in the cell membranes

B. The active site of receptor proteins opens on the inside region of the cell

C. Chemical messengers are received at the binding sites of receptor proteins

D. Shape of receptor doesn't change during attachment of messenger

Answer: B::D

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20. Which of the following are not used as food preservatives?

A. Table salt

B. Sodium hydrogencarbonate

C. Cane sugar

D. Benzoic acid

Answer: B::C

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21. Compounds with antiseptic properties are

A. $CHCl_3$

B. CHI_3

C. boric acid

D. 0.3ppm aqueous solution of Cl_2

Answer: B::C

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22. Which of the following statements are correct about barbiturates ?

A. Hypnotics or sleep producing agents

B. These are tranquilizers

C. Non-narcotic analgesics

D. Pain reducing without disturbing the nervous system

Answer: A::B

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23. Which of the following are sulpha drugs?

A. Sulphapyridine

B. Prontosil

C. Salvarsan

D. Nardil

Answer: A::B

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24. Which of the following are antidepressants ?

A. Iproniazid

B. Phenelzine

C. Equanil

D. Salversan

Answer: A::B::C

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

A. An abtibacterial fungus

B. Ampicillin is its synthetic modification

C. It has bacteriostatic effect

D. It is a broad spectrum antibiotic

Answer: C::D

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26. Which of the following compounds are administered as antacids :

(a) Sodium carbonate

(b) Sodium hydrogen carbonate

(c) Aluminium carbonate

(d) Magnesium hydroxide

A. Sodium carbonate

B. Sodium hydrogencarbonate

C. Aluminium carbonate

D. Magnesium hydroxide

Answer: B::D

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27. Amongst the following antihistamines, which are antacids?

A. Ranitidine

B. Bromopheniramine

C. Terfenadinne

D. Cimetidine

Answer: A::D

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28. Veronal and luminal are derivatives of barbituric acid which are

A. tranquilizers

B. non-narcotic analgesic

C. anti-allergic drugs

D. neurologically active drugs

Answer: A::D

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29. Which of the following are anionic detergents ?

A. Sodium salts of sulphonated long chain alcohol

B. Ester of steric acid and polythylene glycol

C. Quarternary ammonium salt of amine with acetate ion

D. Sodium salts of suphonated long chain hydrocarbons

Answer: A::D

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30. Which of the following statements are correct ?

A. Cationic detergents have germicidal properties

B. Bacteria can degrade the detergents containing highly branched chains

C. Some synthetic detergents can give foam even in ice cold water

D. Synthtic detergents are not soaps

Answer: A::C::D

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31. What is the average molecular mass of drugs ?

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32. Write the uses of medicines.

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33. What are antiseptics ?

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34. Which type of drugs come under anti-microbial drugs?

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35. Where are receptors located ?

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36. What is the harmful effect of hyperacidity ?

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37. Which site of an enzyme is called allosteric site ?

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38. What type of forces are involved in binding of substrate to the active site of enzyme ?

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39. What is the commonality between the antibiotic arsphenamine and azodye ?

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40. Which class of drugs is used in sleeping pills ?

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41. Aspirin is pain relieving antipyretic drug but can be used to prevent heart attack.

Explain.

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42. Both antiacids and antiallergic drugs are antihistamines but they are antihistamines but they cannot replace each other . Explain why ?

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43. What is a soft soap ?

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44. If soap has high alkali content it irritates skin. How can the amount of excess alkali be determined ? What can be the source of excess alkali ?

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45. Explain why some times foaming is seen in river water near the place the place where

sewage water is poured after tratement ?

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46. Which category of the synthetic detergents is used in toothpaste ?

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47. Hair shampoos belong to which class of synthetic detergent ?

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48. Dishwashing soaps are synthetic detergents. What is their chemical nature ?

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49. Draw the diagram showing micelle formation by the following detergent .

$CH_3(CH_2)_{10}CH_2SO_3{}^-NA^+$

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50. How does the branching of hydrocarbon chain of synthetic detergents affect their biodegradability ?

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51. Why is it safer to use soap from the enviromental point of view ?

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52. What are analgesics ?

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53. What is the scientific explanation for the feeling of depression ?

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54. What is the basic difference between antiseptics and disinfectants ?

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55. Between sodiumhydrogen carbonate and magnesium hydroxide , which is a better antacid and why ?

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56. Which anaglesis are called opiates ?

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57. What is the medicinal use of narcotic drugs ?

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58. What are antagonistric drug ?

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59. What is the mode of action of antimicrobial drugs?

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60. What is the side product of soap industry ? Give reactions showing soap formation.

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61. What is the differene between bathing soap and washing soaps ?

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62. How are transparent soaps manufactured ?

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63. What is the advantage of using antihistamines over antacids in the treatment of acidity ?

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64. What are the functions performed by histamine in the body ?

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65. With the help of an example explain how do transquilizers control the feeling of depression ?

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66. Why are certain drugs called enzyme inhibitors ?

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67. What are fillers and what role these fillers play in soap ?

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68. Sugar is the main source of energy as it produces energy on metabolic decomposition. But these days low calorie drinks are more popular, why ?

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69. Pickles have a long shelf life and do not get spoiled for months, Why ?

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70. What is the difference between saccharin and saccharin acid ?

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71. Name an artificial sweetener which is derivative of sucrose.

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72. Name two α-amino acids which form a dipeptide which is 100 times more sweet than cane sugar ?

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73. Aspartame is unstable at cooking temperature, where would you suggest aspartme to be used for sweetening ?

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74. Sodium salts of some acids are very useful as food preservatives. Suggest a few such acids ?

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75. Explain the role of allosteric site oin enzyme inhibition ?

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76. How are receptor protein located in the cell membrane ?

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77. What happen when the bond formed between an enzyme and an inhibitor is a strong covalent bond ?

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78. Match the medicine given in Column I with their uses given in Column

Column I		Column II	
A.	Ranitidine	1.	Tranquilizer
B.	Furacine	2.	Antibiotic
C.	Phenelzine	3.	Antihistamine
D.	Chloramphenicol	4.	Antiseptic
		5.	Antifertility drug

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79. Match the soaps given in Column I with items given in column II.

Column I	Column II
A. Soap chips	1. dried miniature soap bubbles
B. Soap granules	2. small broken pieces of soap formed from melted soaps
C. Soap powder	3. soap powder + abrasives + builders (Na_2CO_3, Na_3PO_4)
D. Scouring soap	4. soap powder + builders like Na_2CO_3 and Na_3PO_4

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80. Match structures given in Column I with the type of detergents given in Column II.

	Column I		Column II
A.	$CH_3(CH_2)_{16}COO(CH_2CH_2O)_n, CH_2CH_2OH$	1.	Cationic detergent
B.	$C_{17}H_{35}COO^-Na^+$	2.	Anionic detergent
C.	$CH_3-(CH_2)_{10}CH_2SO_3^-Na^+$	3.	Nonionic detergent
D.	$\left[CH_3(CH_2)_{15}-\underset{CH_3}{\overset{CH_3}{\underset{\vert}{\overset{\vert}{N}}}}-CH_3\right]^+ Br^-$	4.	Soap

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81. Match the detergrents given in Column I with their uses in Column II.

	Column I		Column II
A.	$\left[CH_3(CH_2)_{15}-\underset{CH_3}{\overset{CH_3}{\underset{\vert}{\overset{\vert}{N}}}}-CH_3\right]^+ Br^-$	1.	Dishwashing powder
B.	$CH_3-(CH_2)_{11}-C_6H_4-SO_3^- Na^+$	2.	Laundry soap
C.	$C_{17}H_{35}CO\overset{-}{O}\overset{+}{Na} + Na_2CO_3$ + Rosin	3.	Hair conditioners
D.	$CH_3(CH_2)_{16}COO(CH_2CH_2O)_n CH_2CH_2OH$	4.	Toothpaste

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82. Match the class of compounds given in Column I with their functions given in Column II.

	Column I		Column II
A.	Antagonists	1.	Communicate message between two neurons and that between neurons to muscles.
B.	Agonists	2.	Bind to the receptor site and inhibit its natural function.
C.	Chemical messenger	3.	Crucial to body's communication process.
D.	Inhibitors	4.	Mimic the natural messenger.
E.	Receptors	5.	Inhibit activities of enzymes.

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83. Match the classes of drugs given in Column I with their action given in Column II.

Column I	Column II
A. Analgesics	1. Inhibit the growth of microorganisms can be given orally
B. Antiseptics	2. Treatment of stress
C. Antihistamines	3. Applied to inanimate objects
D. Antacids	4. Prevents the interaction of histamine with its receptor
E. Tranquilizers	5. Pain killing effect
F. Antibiotics	6. Applied to diseased skin surfaces
G. Disinfectants	7. Treatment of acidity

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84. Assertion (A) Penicillin (G) is an antihistamine.

Reason (R) Penicillin (G) is effective against

gram positive as well as gram negative bacteria.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement reason is wrong statement.

Answer: C

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85. Assertion (A) Sulpha drug contain sulphonamide group.

Reason (R) Salvarsan is a sulpha drug.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement reason is wrong statement.

Answer: D

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86. Assertion (A) Receptors are crucial to body's sulphonamide group.

Reason (R) Receptors are proteins.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement reason is wrong statement.

Answer: A

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87. Assertion (A) Enzymes have active sites that hold substrte molecule for a chemical reaction.

Reason (R) Drugs compete with natural substrate by attaching convalency to the active site of enzyme.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement reason is wrong statement.

Answer: D

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88. Assertion (A) Chemical messengers are chemicals that enable communications of message between tow neurons or between or between neurons and muscles.

Reason (R) Chemicals enter the cell through receptor.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement reason is wrong statement.

Answer: D

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89. Assertion (A) Transparent soaps are made by dissolving soaps in ethanol.

Reason (R) Ethanol makes things invisiable.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement reason is wrong statement.

Answer: D

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90. Assertion (A) Sodium chloride is added to precipitate soap after saponification.

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

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement reason is wrong statement.

Answer: B

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91. Assertion (A) Competitive inhibitors compete with natural substrate for their attachement on the active sites of enzymes.

Reason (R) In competitive inhibitor binds to the allosteric site of the enzyme.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement reason is wrong statement.

Answer: D

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92. Assertion (A) Non-competative inhibitor inhibits the catalytic activity of enzyme by binding with its active site.

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

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is wrong statement reason is correct statement.

Answer: D

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93. Assertion (A) Chemical messenger gives message to the cell without entering the cell. Reason (R) Chemical messenger is received at the binding site of receptor proteins.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement reason is wrong statement.

Answer: B

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94. Assertion (A) Receptor protein show sectivity for one chemical messenger over the other.

Reason (R) Chemical messenger binds to the receptor site and inhibits its natural function.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement reason is wrong statement.

Answer: D

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95. Assertion (A) All chemicals added to food items are called food preservatives.

Reason (R) All these chemicals increase the nutritive value of the food.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement reason is wrong statement.

Answer: C

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96. Assertion (A) Preservative are added to food items.

Reason (R) Preservatives inhibit the growth of microorganisms.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement reason is wrong statement.

Answer: B

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97. Assertion (A) Artificial sweeteners are added to the food to control the intake of calories.

Reason (R) Most of the artificial sweetnes are inert and do not metabolise in the body.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct and reason explains the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement reason is wrong statement.

Answer: B

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98. In what respect do prontosil and salvarsan resemble. Is there may resemblance between azo dye and prontosil? Explain.

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99. How do enzymes catalyse a chemical reactio in the living system ?

Explain drug target interaction taking the example of eneyme as target.

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100. Sythetic detergrents have advantage over usual soaps as far as cleansing power is concerned. But use of synthetic detergents over a long time creates enviormental pollution. How can the pollution caused by synthetic detergents be minimised ? Classify

the detergents according to their chemical nature.

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101. What are enzymes inhibitors ? Classify them on the basis of their mode of attachments on the active site of enzymes. With the help of diagrams explain how do inhibitors the enzymatic activity ?

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