

Class 12 Chemistry Chapter 16 Chemistry in Everyday Life MCQs

1. For medicinal chemists, the classification of medications based on is the most useful.

- a) pharmacological effect
- b) molecular targets
- c) chemical structure
- d) drug action

Answer: b

Explanation: Medicinal chemists are interested in the site where a drug will take effect, and they prescribe specific drugs to people based on their needs. This also includes the structure-based mechanism of pharmacological action on the target.

2. Which of the following medications is not classified according to the pharmacological effect criteria?

- a) Analgesics
- b) Antiseptics
- c) Antihistamines
- d) Antipyretics

Answer: c

Explanation: The pharmacological effects of medications are a group of drugs that all have the same effect on a specific sort of problem. Analgesics relieve pain, antiseptics inhibit the spread of bacteria, and antipyretics aid to reduce body temperature during a fever.

3. Drugs that prevent an enzyme's binding site from a substrate are known as inhibitors.

- a) messengers
- b) poisons

- c) inhibitors
- d) receptors

Answer: c

Explanation: Enzyme inhibitors are drugs that either hinder the enzyme from retaining the substrate or from delivering functional groups that attack the substrate. Enzymes' catalytic activity is inhibited by these substances.

4. Which of the following occurs when the enzyme and the inhibiting medication have a strong bond?

- a) The active site slowly regains its original shape
- b) The body synthesizes a new enzyme
- c) The enzyme is blocked temporarily
- d) The enzyme develops a new active site

Answer: b

Explanation: When the enzyme and the medication form a strong covalent link, the enzyme is permanently inhibited. The entire drug-enzyme complex is degraded, and a new enzyme is synthesized as a result.

5. Which of the following is not a factor in receptor selectivity for messengers?

- a) Shape of binding site
- b) Location in the membrane
- c) Amino acid composition
- d) Structure

Answer: b

Explanation: There are many distinct types of receptors in the body, all of which are located in different places. They communicate with a variety of chemical signals. Their preference for one messenger over the other is due to differences in binding sites, structure, and amino acid composition.

6. Which of the following chemicals aids in the regulation of stomach acid production?

- a) Ranitidine
- b) Cimetidine
- c) Histamine
- d) Omeprazole

Answer: c

Explanation: Histamine is the substance that causes pepsin and HCl to be secreted in the stomach. Cimetidine (Tegamet), ranitidine (Zantac), omeprazole, and lansoprazole are drugs that block histamine from interacting with stomach wall receptors, resulting in less acid being released.

7. Which of the following should never be used to treat people directly?

- a) Antiseptics
- b) Antimalarials
- c) Disinfectants
- d) Antibiotics

Answer: c

Explanation: Antimalarials and antibiotics are taken orally in pill form. Antiseptics are used to treat the skin. Disinfectants are used to disinfect and protect items such as floors, toilets, and drains from pathogenic activity.

8. Which of the following is a preservative and which is not?

- a) Sodium benzoate
- b) Potassium metabisulphite
- c) Saccharin
- d) Sorbic acid salts

Answer: c

Explanation: Preservatives are chemicals added to food to keep it from spoiling and to keep its nutritional value and flavour. The most common examples are salt, sugar, and oils. In jams, potassium metasulphite is utilized. Dulcin is a synthetic sweetener.

9. What type of soap is generated when a soap is dissolved in ethanol and then the surplus solvent is evaporated?

- a) Shaving soap
- b) Floating soap
- c) Transparent soap
- d) Laundry soap

Answer: c

Explanation: A transparent soap is created by dissolving the soap in an ethanol solution while manufacturing it and then evaporating the excess ethanol not used in the process.

10. Choose the cationic detergent from the list below.

- a) Pentaerythritol monostearate
- b) Sodium dodecyl sulphate
- c) Cetyltrimethylammonium bromide
- d) Sodium lauryl sulphate

Answer: c

Explanation: Bromine is the anion of cetyltrimethylammonium bromide, a quaternary salt cation. The cationic component aids in the washing process. Non-ionic detergents are pentaerythritol monostearate and sodium dodecyl sulphate and sodium lauryl sulphate, whereas anionic detergents are sodium dodecyl sulphate and sodium lauryl sulphate.