

Chemistry Worksheet on Chapter 16 Chemistry in Everyday life with Answers- Set 2

Q-1:Chloramine T is a dye that is commonly used as

- a) Antipyretic
- b) Analgesics
- c) Antiseptic
- d) Tranquiliser

Answer: c) Antiseptic

Explanation: Antiseptic drugs kill the microorganisms that cause septic disease. Some commonly used antiseptics are: Dettol, Phenol, Iodoform, Boric acid , Chloramine T etc.

Q-2: Which among the following is Vitamin E?

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

Answer: c) Tocopherol

Explanation: Tocopherol is a Vitamin E whereas ciprofloxacin, paracetamol, ibuprofen are antibiotics, antipyretics, pain relievers respectively.

Q-3: What are barbiturates? What are its various derivatives?

Answer: Veronal, amytal, nembutal, luminal, and seconal, which are barbituric acid derivatives, are an important class of tranquilisers. Barbiturates are the name given to these derivatives. Barbiturates are hypnotic, or sleep-inducing drugs.

Q-4: Which of the following drugs is used to prevent heart attacks?

- a) Heroin
- b) 2-Acetoxy benzoic acid
- c) Arsphenamine
- d) Phenyl salicylate

Answer: b) 2-Acetoxy benzoic acid

Explanation: Aspirin, chemically known as 2-Acetoxy benzoic acid is a non narcotic analgesic. These medications are used to prevent platelet coagulation and have many other effects such as reducing fever. Aspirin is used to prevent heart attacks due to its anti-clotting properties.

Q-5: Give a point of difference between antiseptic and disinfectant?

Answer:

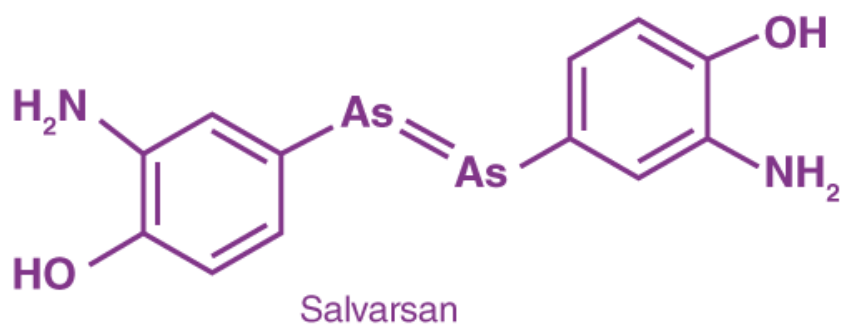
Antiseptic	Disinfectant
Antiseptics are substances that are applied to living tissues such as wounds, cuts, ulcers, and diseased skin surfaces. Furacine, soframycin are some examples	Disinfectants are used on inanimate objects such as floors, drainage systems, instruments, and so on.
0.2% solution of phenol is an antiseptic.	1% solution of phenol is a disinfectant

Q-6: Salvarsan is used in the treatment of syphilis. Which linkage is present in it?

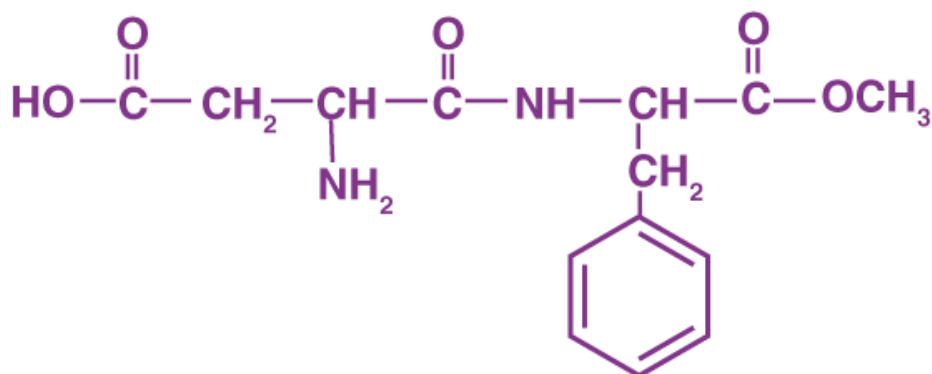
- a) N=N
- b) As=As
- c) S-S
- d) P-P

Answer: b) As=As

Explanation: Paul Ehrlich, a German bacteriologist researched arsenic-based structures in order to create less toxic substances for syphilis treatment. Arsphenamine, also known as salvarsan, was developed by him. The below structure clearly shows it has As=As linkage present in it.



Q-7: Aspartame is widely used as an artificial sweetener. The structure for the same is shown below:

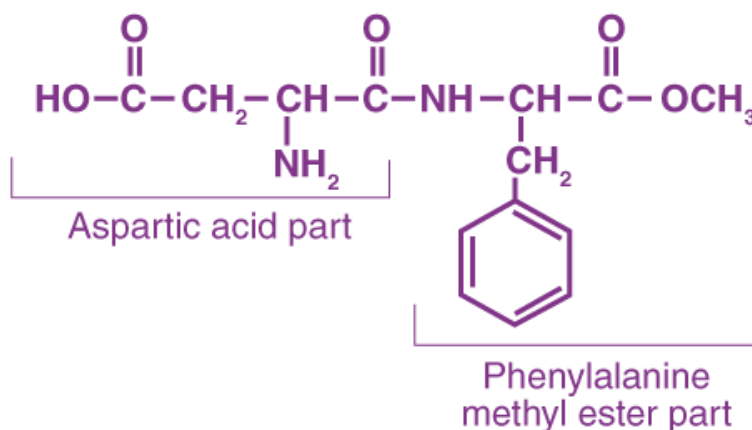


Answer the following questions:

- Which two amino acids are present in it?
- Indicate the amino acids in the structure.
- Why is it limited to cold foods and soft drinks?

Answer:

- Aspartic acid and phenylalanine



b)

c) Because it is unstable at cooking temperatures, it is restricted to cold foods and soft drinks.

Q-8: Why do hair washed with hard water look dull?

Answer: Calcium and magnesium ions can be found in hard water. When sodium or potassium soaps are dissolved in hard water, these ions form insoluble calcium and magnesium soaps, respectively. In water, these insoluble soaps separate as scum. Because of this sticky precipitate, hair washed with hard water appears dull.

Q-9: Which part of anionic detergent is involved in the cleansing action?

- a) Cationic part
- b) Non ionic part
- c) Neutral part
- d) Anionic part

Answer: d) Anionic part

Explanation: Anionic detergents are so named because a large portion of their molecules are anions, and the anionic portion of the molecule is responsible for cleaning. These are sodium salts of long chain sulphonated alcohols or hydrocarbons.

Q-10: If you had an option of using synthetic detergents or soaps for cleaning? Which will you choose?

Answer: Synthetic Detergents

Explanation: Synthetic detergents are cleaning agents that have all of the properties of soap but do not contain any soap. These can be used in both soft and hard water because they produce foam even in hard water.

Because they can be used in hard water and their hydrocarbon chains do not precipitate with calcium and magnesium ions(hard water), they are superior to soaps. They also have a better cleansing action than soap.

Q-11: Fill in the blanks

- a) Chlorine in concentrations of _____ppm in aqueous solution is used as disinfectant.
- b) _____ is widely used as an antifertility drug.
- c) _____ resembles in structure to the compound Salvarsan.
- d) Neurologically active drugs are _____ and _____.
- e) Dimetapp is another name for _____

Answer:

- a) 0.2-0.4
- b) Norethindrone
- c) Prontosil
- d) Analgesics and Tranquillisers
- e) brompheniramine

Q-12: What are the various functions of histamine?

Answer: Histamine is an extremely effective vasodilator. It serves a number of purposes. It relaxes other muscles, such as those in the walls of fine blood vessels, while contracting smooth muscles in the bronchi and gut. Histamine is also responsible for the nasal congestion associated with common cold and allergic response to pollen.

Q-13: Which interactions do the substrate have with the enzyme?

Answer: Substrates bind to the enzyme's active site via a variety of interactions including ionic bonding, hydrogen bonding, van der Waals interaction, and dipole-dipole interaction.

Q-14: Why isn't a combination of aluminium and magnesium hydroxide considered a better antacid over tegamet and Zantac?

Answer: Antacids are medications that neutralise stomach acid to relieve indigestion and heartburn.

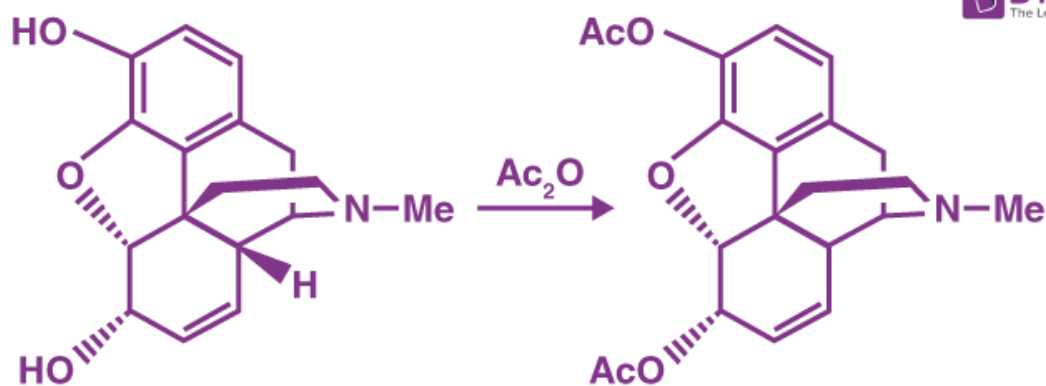
Treatments involving the combination of aluminium and magnesium hydroxide treats only the symptoms and not the underlying cause. As a result, patients cannot be easily treated with these metal salts. Ulcers can also occur due to acidity in severe cases, which can be fatal in their advanced stages, and the only treatment is to remove the affected portion of the stomach.

Q-15: The diacetyl derivative of morphine is

- a) Codeine
- b) Apomorphine
- c) Heroin
- d) None of the above

Answer: c) Heroin

Explanation: The 3- and 6-hydroxyl groups of morphine are acetylated in the presence of excess acetic anhydride and heat, yielding heroin. The following reaction takes place:



Q-16: What are preservatives? Give some examples

Answer: Food preservatives prevent food spoilage by inhibiting microbial growth. Sugar, table salt, sodium benzoate, and vegetable oils are the most commonly used preservatives.

Q-17: Bithional contains two rings of 4,6-dichlorophenol that are linked at position 2 via

- a) Oxygen
- b) Sulphur
- c) Phosphorous
- d) Nitrogen

Answer: b) Sulphur

Q-18: Which of the following food additives has nutritive value?

- a) Antioxidants
- b) Food colours
- c) Preservatives
- d) Nutritional supplements

Answer: d) Nutritional supplements

Q-19: Why are chemicals called food additives added to food?

Answer: Chemicals are added to food for:

- (i) their preservation
- (ii) enhancing their appeal, and
- (iii) adding nutritional value in them.

Q-20: Name the artificial sweetening agent that does not provide calories.

Answer: Sucralose

Explanation: It is a sucrose trichloro derivative. It has the taste and appearance of sugar. At cooking temperature, it remains stable. It contains no calories.