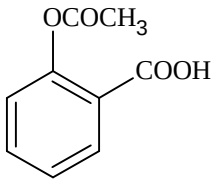
SOLUTION TEST-B

1. Ofloxacin → Bactericidal → have only a killing effect and whereas the other three are electrostatic and have inhibitory effect.

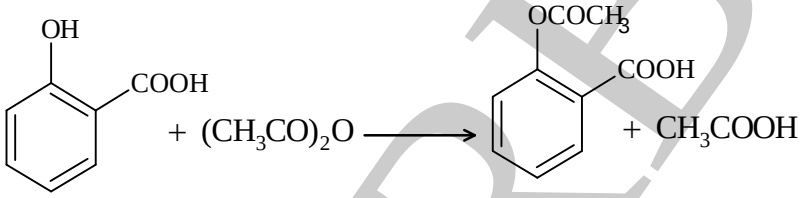
   The correct answer is (ii)

2. Potassium sulphite act as an antioxidant as well as antimicrobial agent in wine and beer industry.

   The correct answer is (i)

3. Aspirin is  and its IUPAC name is 2-Acetoxy benzoic acid.

   It is obtained by acetylation of salicylic acid



Salicylic acid
(2-hydroxy benzoic acid)

Aspirin

   The correct answer is (iv)

4. In anionic detergents, the larger part of the molecule is negatively charged.

   The correct answer is (ii)

5. Since non-ionic detergents are straight chain alkyl groups which can be decomposed by bacteria. Hence, non-ionic detergents are biodegradable.

   The correct answer is (iii)

6. Bithional is added to soaps to impart antiseptic properties.
7. Aspirin or Paracetamol
8. (i) **Chloroxylenol** → an antiseptic in dettol. The other two are antibiotics.

   (ii) **Phenacetin** → an antipyretic. The other three are tranquilisers.

9. (i) Aspartame

   Disadvantage: Aspartame is unstable at cooking and baking temperature.

   (ii) The artifical sweetener given to diabetic patient is **Saccharin.**

10. (i) Antibiotics which kill or inhibit a wide range of gram-positive and gram-negative bacteria are broad spectrum antibiotics. Example. Chloroamphenicol. Antibiotics which are effective against only one gram-positive or gram negative bacteria are narrow spectrum antibiotics. Example: Penicillin.

11. (i) **Anti-oxidants** are the chemicals which when added retards the action of oxygen on food material thereby help in storage. Example: Butylated hydroxy anisole or butylated hydroxy toluene.

(ii) **Non-ionic detergents** do not contain any ion in their constitution. These are esters of long chain fatty acids and polythelyene glycol. These are used as dish washing detergents.

(iii) **Antiseptics** are the chemicals which are used to either kill or prevent the growth of microsrganisms. These are applied to the living tissues such as wounds, cuts, etc. Example: Dettol.

12. (a) Drug action depends on drug enzyme interaction. Drug inhibit the attachment of substrate on active site of enzyme either

(i) by attaching itself on the active sites of enzyme. Such drugs are called compititive inhibitors or

(ii) drug may not bind to the enzyme's active site but bind at a different site of enzyme which is called **allosteric** site. This changes the shape of the active site in such a way that substrate cannot recognise it.

(b) Non-narcotic analgesics are helped in relieving skeletal pain. Example: Aspirin.

13. (i) **Antacids** are the weak bases used to neutralise the extra acid produced in the stomach which causes irritation and pain. Example: Milk of magnesia.

(ii) **Food preservatives:** These are the chemicals which prevents spoilage of food due to microbial growth. Example: Table salt, sugar.

(iii) **Tranquilisers:** These are neutrologically active drugs. These are used for the treatment of stress, mild or even severe mental stress. Example: noradrenaline.

14. (i) Chloropheneramine is an antihistamine

(ii) Terpeneol is a constituent of dettol, act as antiseptic.

(iii) Chlorine can act as antiseptic (< 0.2 ppm) and (0.2 – 0.4 ppm) act as disinfectant.

15. (a) Biodegradable detergents one decomposed by bacteria and do not cause pollution. Example: Sodium lauryl sulphate. Non-biodegradable detergents do not decomposed by bacteria and leads to pollution of rivers, ponds, etc. Example: Cetyl trimethyl ammonium bromide.

The advantage of using detergents over soaps is that detergents can work in hard water.

(b)

(i) **Anti-malarial drugs:** These drugs are used to destroy / prevent development or inhibit the action of virus or parasites. Example: hydroxy chloroquine.

(ii) **Saponification of fats:** This is defined as the alkaline hydrolysis of fats (e.g, glyceryl ester of fatty acids) to from glycerol and sodium salt of fatty acids called soap.

