CHEMISTRY IN EVERYDAY LIFE

MULTIPLE CHOICE QUESTIONS

1. Which of the following is a basic dyes

(a) Congo Red (b) Aniline Yellow

(c) Alizarin (d) Indigo

Sol. (b)

Aniline yellow is a basic dyes.

2. The dyes which are applied to the fabric in the colourless reduced state and then oxidised to coloured state are called

(a) Vat dyes (b) Disperse dyes

(c) Triphenyl methane dye (d) Azo dyes

Sol. (a)

Vat dyes are insoluble compounds which reduction give soluble (leucoform) product. The product may be either coloured or colourless a have affinity for specific fabrics e.g. Indigo.

3. Aspirin is

(a) Antibiotic (b) Antipyretic

(c) Sedative (d) Psychedelic

Sol. (b)

Aspirin is antipyretic i.e., a drug which is responsible for lowering the temperature of Feverish organism to normal, other antipyretic drugs are paraacetamol, Phenacetin.

4. Substance used for bringing down temperature in high fever are called

(a) Pyretics (b) Antipyretics

(c) Antibiotics (d) Antiseptics

Sol. (b)

It is antipyretic i.e., a drug which is responsible for lowering the temperature of feverish organism to normal.

5. Which of the following is used as an antibiotic

(a) Ciprofloxacin (b) Paracetamol

(c) Ibuprofen (d) Tocopherol

Sol. (a)

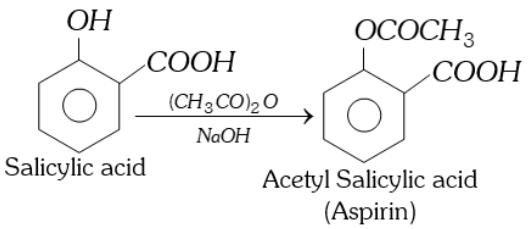
Ciprofloxacin is used as antibiotic while Paracetamol, Ibuprofen and tocopherol are respectively antipyretic, pain killer and Vit. E.

6. When salicyclic acid is treated with acetic anhydride we get

(a) Aspirin (b) Paracetamol

(c) Salol (d) None of these

Sol. (a)



7. Which of the following is not an antibiotic

(a) Penicillin (b) Sulphaguanidine

(c) Chloramphenical (d) None of these

Sol. (b)

Antibiotics are those drugs, which act against bacterial and viral infections e.g., Chloramphenicol Streptomycin, Penicillin, Tetracycline etc. Sulphaguanidine is a Sulphadrug.

8. Which of the following is not a broad spectrum antibiotic

(a) Tetracycline (b) Chloromycetin

(c) Penicillin (d) None of these

Sol. (c)

Penicillinis not a broad spectrum antibiotic since it is active against infections caused by gram positive bacteria only.

9. Structurally biodegradable detergent should contain

(a) Normal alkyl chain (b) Branched alkyl chain

(c) Phenyl side chain (d) Cyclohexyl side chain

Sol. (b)

Structurally biodegradable detergent contain normal (or Linear) alkyl chain.

10. One of the oxidants used with liquid propellants is

(a) Ammonium perchlorate (b) Nitrocellulose

(c) Sulphuric acid (d) Dinitrogen tetraoxide (N_2O_4)

Sol. (d)

Dinitrogen tetraoxide is used as an oxidant with liquid propellant.

11. Which of the following could act as a propellant for rocket

(a) Liquid hydrogen + Liquid nitrogen

(b) Liquid oxygen + Liquid argon

(c) Liquid hydrogen + Liquid oxygen

(d) Liquid nitrogen + Liquid oxygen

Sol. (c)

Liquid hydrogen + Liquid oxygen Could act as a propellant or rocket.

12. Sodium alkyl benzene sulphonate is used as

(a) Soap (b) Fertilizers

(c) Pesticides (d) Detergents

Sol. (d)

It is used as detergents.

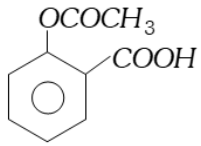
13. Aspirin is chemically

(a) Methyl salicylate (b) Ethyl salicylate

(c) Acetyl salicylic acid (d) o-hydroxy benzoic acid

Sol. (c)

Aspirin an antibiotic chemically Acetyl Salicylic acid



14. Which of the following can possibly be used as analgesic without causing addiction and any modification

(a) Morphine (b) N-acetylparaaminophenol

(c) Diazepam (d) Tetra hydrocatenol

Sol. (c)

"Diazepam" can be used as analgesic without addition and modification.

15. Further growth of cancerous cells in the body is arrested by

(a) Physiotherapy (b) Chemotherapy

(c) Electrotherapy (d) Psychotherapy

Sol. (b)

Paul Ehrlich, the father of chemotherapy defined it to injure or destroy infection micro-organism by the use of drugs without causing any injury to the host.

16. Which one of the following is known as broad spectrum antibiotics

(a) Streptomycine (b) Ampicillin

(c) Chloramphenicol (d) Penicillin G

Sol. (c)

Chloramphenicol is broad spectrum antibiotic used in the treatment of typhoid, dysentry, acute fever.

17. Which of the following is a local anaesthetic

(a) Diazepam (b) Procaine

(c) Mescaline (d) None of the above

Sol. (b)

The anaesthetics produce temporary insensitibility to the vital function of all type of cells, specially of nervous system and are used during surgical operations.

These are classified as (a) General anasthetic – producing unconsciousness all over the body e.g. N_2O, Cyclo propane, chloroform (b) Local anasthetic – effect only the part of body e.g. Xylocaine, Procain etc.

18. Which of the following is molecular disease

(a) Allergy (b) Cancer

(c) German measeles (d) Sickel-cell-anaemia

Sol. (b)

"Cancer" is known as molecular disease.

19. Which statement is false

(a) Some disinfectants can be used antiseptics at low concentration.

(b) Sulphadiazine is a synthetic antibacterial.

(c) Ampicillin is a natural antibiotic.

(d) Aspirin is analgesic and antipyratic both.

Sol. (c)

Ampicillin is a synthetic antibiotic.

20. Tranquilisers are substances used for the treatment of

(a) Cancer (b) AIDS

(c) Mental diseases (d) Physical disorders

Sol. (c)

"Tranquillisers" are medicines used to treat mental diseases. They are called psychotherapeutic drugs.

21. Which one is acidic dye

(a) Methyl orange (b) Methyl red

(c) Phenolphthalein (d) All of these

Sol. (a)

Acid dyes are characterised by the presence of –COOH, $-SO_3H$ or Phenolic group. They are applied in the presence of acidic solution. They are usually applied to Wool, Silk, Nylon. They have affinity for cotton. Common examples are Orange I, Orange II, Methyl red etc.

22. Alizarin gives a red colour by mordanting it with the sulphate of a metal. The metal ion involved is

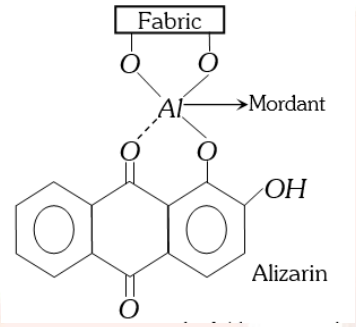
(a) Cr^{3+} (b) Fe^{3+}

(c) Al^{3+} (d) Sn^{2+}

Sol. (c)

"Alizarin" is a typical mordant dye gives different colours depending on the metal ion used, for example with Al^{+3}, alizarin gives a rose red colour.

Co-ordination compound of alizarin with Al^{+3} as follow



Coordination compound of Alizarin with Al^{3+}

23. Which of the following is not a correct statement with regard to stearic acid and oleic acid molecules?

(a) Both are fatty acids having same number of carbon atoms

(b) Both are saturated fatty acids

(c) One olefinic bond is present in oleic acid

(d) The alkyl group of stearic acid contains 35 hydrogen atoms

Solution.(b)

Stearic acid and oleic acid, both are saturated fatty acids. And found in various animal and plant and vegetable fats.

24. Parathion is

(a) An organic phosphorus compound

(b) Chlorinated aromatic compound

(c) Chlorinated aliphatic compound

(d) Benzene derivative

Sol. (a)

"Parathion" is an organic phosphorus compounds.

25. The principal buffer present in human blood

(a) $NaH_2PO_4 + Na_2HPO_4$ (b) $H_3PO_4 + NaH_2PO_4$

(c) $CH_3COOH + CH_3COONa$ (d) $H_2CO_3 + HCO_3^-$

Sol. (d)

H_2CO_3 + HCO_3^- buffer present in human blood, which maintain pH of blood.

26. Which of the following represents soap

(a) $C_{17}H_{35}COOK$ (b) $C_{17}H_{35}COOH$

(c) $C_{15}H_{31}COOH$ (d) $(C_{17}H_{35}COO)_2Ca$

Sol. (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.

27. Asthma patient use a mixture of ….. for respiration

(a) O_2 and N_2O (b) O_2 and He

(c) O_2 and NH_3 (d) O_2 and CO

Sol. (b)

A mixture of O_2 and He is used for respiration as helium is inert and light gas and diffuse rapidly.

28. A dye imparts red colour on fabric. What colour of light was absorbed by the dye

(a) Blue (b) Red

(c) Green (d) Orange

Sol. (c)

Green is the complimentary colour of red.

29. Which of the following is an azo dye

(a) Orange-I (b) Phenolphthalein

(c) Malachite green (d) Methylene blue

Sol. (a)

Orange-I is an acid azodye.

30. An example of anthraquinone dye is

(a) Alizarin (b) Basic acid

(c) Methylene blue (d) Phenolphthalein

Sol. (a)

Alizarin is an example of anthraquinon dye.