

# 35. Chemistry in Everyday Life – Multiple Choice Questions

## 1. Dyes and Pigment

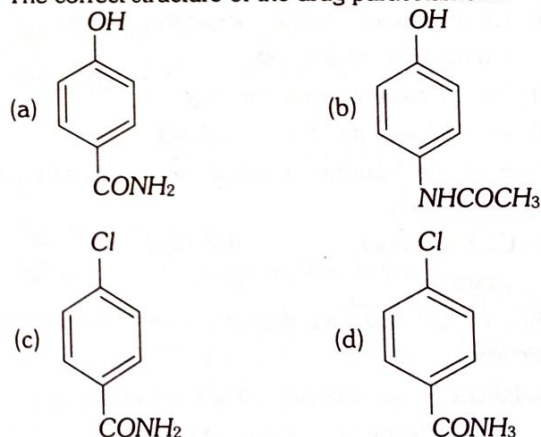
- Hair dyes contain
  - Copper nitrate
  - Gold chloride
  - Silver nitrate
  - Copper sulphate
- Select the basic dye from the following
  - Methyl red
  - Congo red
  - Malachite green
  - Methyl orange
- Which of the following is an azo dye
  - Orange-I
  - Phenolphthalein
  - Malachite green
  - Methylene blue
- Which of the following is a basic dye
  - Congo Red
  - Aniline Yellow
  - Alizarin
  - Indigo
- The dyes which are applied to the fabric in the colourless reduced state and then oxidised to coloured state are called
  - Vat dyes
  - Disperse dyes
  - Triphenyl methane dye
  - Azo dyes
- Indigo is a/an
  - Organic dye
  - Organic polymer
  - Detergent
  - Pesticide
- Which of the following is a natural dye
  - Martius yellow
  - Alizarin
  - Phenolphthalein
  - Orange I
- Alizarin a mordant dye is not used in
  - Cotton dyeing
  - Printing
  - Painting
  - Chromium lakes for wood dyeing
- Which of the following is not a chromophore
  - $-N=N-$
  - $-NO$
  - $-NO_2$
  - $-NH_2$
- Which is the wrong statement with regards to Indigo
  - Indigo was extracted in India from plants of the 'Indigo ferra' group
  - The chemical structure of Indigo was determined by Baeyer, a German chemist who also synthesized it
  - Indigo is a dark blue solid soluble in water giving a blue solution
  - Indigo is fixed to fabrics by the vat process
- What is the name for red azo dye
  - p* - hydroxy azo benzene
  - $\beta$  - naphthyl azo benzene
  - p* - amino azo benzene
  - p* - N,N dimethyl amino azo benzene

- Which of the following groups is not an auxochrome
  - $-N(CH_3)_2$
  - $-OH$
  - $-OCH_3$
  - $>C=N$

- Which one is acidic dye
  - Methyl orange
  - Methyl red
  - Phenolphthalein
  - All of these

## 2. Drugs and Medicines

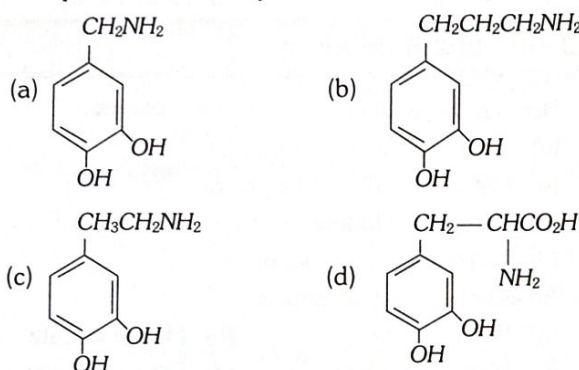
- Dettol is the mixture of
  - Chloroxylenol and Bithionol
  - Chloroxylenol and Terpineol
  - Phenol and Iodine
  - Terpineol and Bithionol
- An ester used as medicine is
  - Ethyl acetate
  - Methyl acetate
  - Methyl salicylate
  - Ethyl benzoate
- Which of the following is not a broad spectrum antibiotic
  - Tetracycline
  - Chloromycetin
  - Penicillin
  - None of these
- The first discovered antibiotic is
  - Streptomycin
  - Penicillin
  - Chloramphenicol
  - Tetracyclin
- The correct structure of the drug paracetamol is



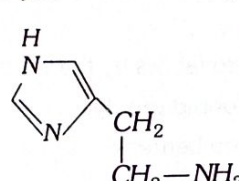
- Which of the following statements is not correct
  - Some antiseptics can be added to soaps
  - Dilute solutions of some disinfectants can be used as antiseptic
  - Disinfectants are antimicrobial drugs
  - Antiseptic medicines can be ingested
- Which is the correct statement about birth control pills
  - Contain estrogen only
  - Contain progesterone only
  - Contain a mixture of estrogen and progesterone derivatives
  - Progesterone enhances ovulation



8. A narrow spectrum antibiotic is active against .....
- Gram positive or gram negative bacteria
  - Gram negative bacteria only
  - Single organism or one disease
  - Both gram positive and gram negative bacteria
9. An antibiotic with a broad spectrum
- Kills the antibodies
  - Acts on a specific antigen
  - Acts on different antigens
  - Acts on both the antigens and antibodies
10. Parkinson's disease is linked to abnormalities in the levels of dopamine in the body. The structure of dopamine is



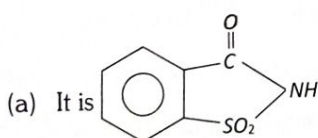
11. One of the most widely used drug in medicine, iodox is
- Methyl salicylate
  - Ethyl salicylate
  - Acetyl salicylic acid
  - o*-hydroxy benzoic acid
12. The most useful classification of drugs for medicinal chemists is
- On the basis of chemical structure
  - On the basis of drug action
  - On the basis of molecular targets
  - On the basis of pharmacological effect
13. Which of the following is not a target molecule for drug function in body
- Carbohydrates
  - Lipids
  - Vitamins
  - Proteins
14. Which of the following statements is not true about enzyme inhibitors
- Inhibit the catalytic activity of the enzyme
  - Prevent the binding of substrate
  - Generally a strong covalent bond is formed between an inhibitor and an enzyme
  - Inhibitors can be competitive or non-competitive
15. An antibiotic contains nitro group attached to aromatic nucleus. It is
- Penicillin
  - Streptomycin
  - Tetracycline
  - Chloramphenicol
16. Ibuprofen contains
- Only *S*-enantiomer
  - Only *R*-enantiomer
  - Racemic mixture of both *R* and *S* enantiomer
  - Both *R* and *S* enantiomer are active pain killers

17. Chloramine-T is a/an
- Disinfectant
  - Antiseptic
  - Analgesic
  - Antipyretic
18. Streptomycin is effective in the treatment of
- Tuberculosis
  - Malaria
  - Typhoid
  - Cholera
19. Morphine is
- Anaesthetic
  - Analgesic
  - Antiseptic
  - Antibiotics
20. Various phenol derivatives, tincture of iodine (2–3%  $I_2$  in water / alcohol) and some dyes like methylene blue are
- Antiseptics
  - Disinfectants
  - Analgesics
  - Antipyretics
21. Which of the following is not an antipyretic
- Aspirin
  - Paracetamol
  - Barbituric acid
  - Phenacetin
22. Which of the following is used as an antibiotic
- Ciprofloxacin
  - Paracetamol
  - Ibuprofen
  - Tocopherol
23. Paracetamol is an
- Analgesic
  - Antipyretic
  - Both (a) and (b)
  - None of the above
24. Penicillin is
- Analgesic
  - Antipyretic
  - antimalarials
  - antibiotic
25. The drug showing potential control over "hyperacidity" in human is
- Ranitidine
  - Iproniazid
  - Soda-lime
  - Ursodeoxy cholic acid
26. Aspirin is a/an
- Analgesic and antipyretic
  - Antibiotic
  - Insecticide
  - Herbicide
27. The compound that causes general antidepressant action on the central nervous system belongs to the class of
- Analgesics
  - Tranquilizers
  - Narcotic analgesics
  - Antihistamines
28. Which of these is a hypnotic
- Metaldehyde
  - Acetaldehyde
  - Paraldehyde
  - None of these
29. The drug  is used as

- Antacid
- Analgesic
- Antimicrobial
- Antiseptic



30. Which of the following is not true  
 (a) Some disinfectants can be used as antiseptics  
 (b) Sulphadiazine is a synthetic antibacterial  
 (c) Aspirin is analgesic as well as antipyretic  
 (d) Diazepam is an antihistamine drug
31. 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
32. Which of the following statements is correct  
 (a) Some tranquilizers function by inhibiting the enzymes which catalyse the degradation of noradrenaline  
 (b) Tranquilizers are narcotic drugs  
 (c) Tranquilizers are chemical compounds that do not affect the message transfer from nerve to receptor  
 (d) Tranquilizers are chemical compounds that can relieve pain and fever
33. Salvarsan is arsenic containing drug which was first used for the treatment of  
 (a) Syphilis (b) Typhoid  
 (c) Meningitis (d) Dysentery
34. Which of the following is not true  
 (a) Prontosil is not converted into sulphanilamide in the body  
 (b) Erythromycin is a bacteriostatic antibiotic  
 (c) Vancomycin is a broad spectrum antibiotic  
 (d) Ampicillin is not a natural antibiotic
35. Which is correct about saccharin



- (b) It is 600 times sweeter than sugar  
 (c) It is used as sweetening agent  
 (d) All of these
36. Which of the following acts as an antioxidant in edible oils  
 (a) Vitamin B (b) Vitamin C  
 (c) Vitamin D (d) Vitamin E
37. Which of the following chemicals can be added for sweetening of food items at cooking temperature and does not provide calories  
 (a) Sucrose (b) Glucose  
 (c) Aspartame (d) Sucralose
38. Which of the following will not enhance nutritional value of food  
 (a) Minerals (b) Artificial sweeteners  
 (c) Vitamins (d) Amino acids

39. Which of the following is not used in nail polish  
 (a) Acetone (b) Cellulose nitrate  
 (c) Red dye (d) Benzene
40. Food preservative among the following  
 (a) Sodium bisulphate (b) Vanomycin  
 (c) BHT (d) Sodium benzosulphate
41. Which of the following is useful as a food preservative  
 (a) Salts of sorbic acid (b) Sucrolose  
 (c) Ascorbic acid (d) Citric acid

### 3. Rocket - Propellant and Other

1. Which of the following represents a biliquid propellant  
 (a) Nitroglycerine + nitrocellulose  
 (b)  $N_2O_4$  + acrylic rubber  
 (c)  $N_2O_4$  + unsymmetrical dimethyl hydrazene  
 (d) None of these
2. Detergents are prepared by the action of  $H_2SO_4$  followed by neutralization by starting with  
 (a) Cholesterol (b) Lauryl alcohol  
 (c) Cyclohexanol (d) *p*-nitrophenol
3. Sodium alkyl benzene sulphonate is used as  
 (a) Soap (b) Fertilizers  
 (c) Pesticides (d) Detergents
4. Which of the following is used as an oxidising agent in hybrid fuel  
 (a)  $CrO_3$  (b)  $Cr_2O_3$   
 (c)  $N_2O_4$  (d)  $H_2O_2$
5. Which of the following represents a synthetic detergent  
 (a)  $C_{15}H_{31}COOK$   
 (b)  $CH_3[CH_2]_{16}COONa$   
 (c)  $C_{12}H_{25}$  (d) None of these
6. 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)  $(C_{17}H_{35}COO)_2Ca$
7. 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  $CO$
8. Compound which is added to soap to impart antiseptic properties is  
 (a) Sodium laurylsulphate  
 (b) Sodium dodecylbenzenesulphonate  
 (c) Rosin  
 (d) Bithional
9. Which of the following enhances leathering property of soap  
 (a) Sodium carbonate (b) Sodium rosinate  
 (c) Sodium stearate (d) Trisodium phosphate

10. Glycerol is added to soap. It functions
- (a) As a filler (b) To increase leathering  
(c) To prevent rapid drying (d) To make soap granules
11. Polyethyleneglycols are used in the preparation of which type of detergents
- (a) Cationic detergents (b) Anionic detergents  
(c) Non-ionic detergents (d) Soaps

12. End of detergents have

- (a) Ester group (b) Sodium sulphate  
(c) Aldehyde (d) Amine group

13. Match the chemicals in **Column I** with their uses in **Column II**

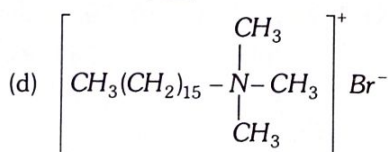
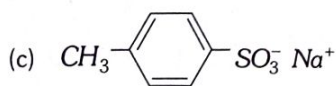
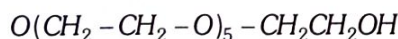
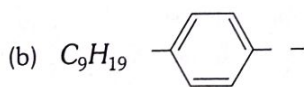
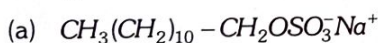
Column I	Column II
(A) Sodium perborate	(I) Disinfectant
(B) Chlorine	(II) Antiseptic
(C) Bithional	(III) Milk bleaching agent
(D) Potassium stearate	(IV) Soap

- (a) A = I, B = II, C = III, D = IV  
(b) A = II, B = III, C = IV, D = I  
(c) A = III, B = I, C = II, D = IV  
(d) A = IV, B = I, C = II, D = III

14. Which among the following detergents is non-ionic in character

- (a) Sodium lauryl sulphate  
(b) Pentaerythrityl stearate  
(c) Cetyltrimethyl ammonium chloride  
(d) Sodium n-dodecyl benzene sulphonate

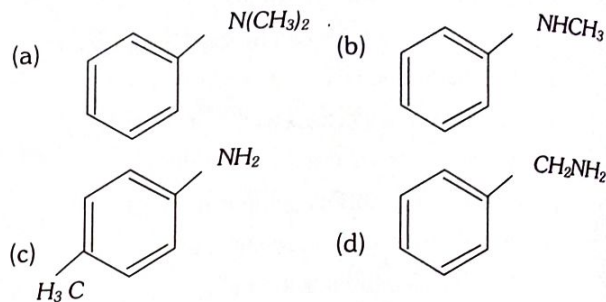
15. Which of the following is an example of liquid dishwashing detergent



#### 4. IIT-JEE/ AIEEE

1. Amongst the compounds given, the one that would form a brilliant coloured dye on treatment with  $\text{NaNO}_2$  in dilute  $\text{HCl}$  followed by addition to an alkaline solution of  $\beta$ -naphthol is

[2011]



3. For the identification of  $\beta$ -naphthol using dye test, it is necessary to use

[2014]

- (a) Dichloromethane solution of  $\beta$ -naphthol  
(b) Acidic solution of  $\beta$ -naphthol  
(c) Neutral solution of  $\beta$ -naphthol  
(d) Alkaline solution of  $\beta$ -naphthol

3. Aspirin is also known as

[1989, 94, 2010, 1992, 1995, 2004, 2010, 2012]

- (a) Methyl salicylic acid (b) Acetyl salicylic acid  
(c) Acetyl salicylate (d) Methyl salicylate

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

[2002, 2005, 2012]

- (a) Pyretics (b) Antipyretics  
(c) Antibiotics (d) Antiseptics

5. Which of the following compounds is not an antacid

[2015]

- (a) Aluminium hydroxide (b) Cimetidine  
(c) Phenelzine (d) Ranitidine

6. Which of the following is an anionic detergent

[2016]

- (a) Sodium lauryl sulphate  
(b) Cetyltrimethyl ammonium bromide  
(c) Glyceryl oleate  
(d) Sodium stearate

#### 5. NEET/ AIPMT/ CBSE-PMT

1. Chloramphenicol is

[1987, 1992, 1999, 2001, 2007, 2012]

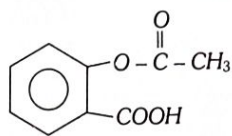
- (a) Narrow spectrum antibiotic  
(b) Broad spectrum analgesic  
(c) Broad spectrum antibiotic  
(d) Broad spectrum antibacterial



2. Which of the following is employed as tranquilizer  
[2009; 2016]  
(a) Equanil (b) Naproxen  
(c) Tetracyclin (d) Dettol
3. Which one of the following is employed as a Tranquilizer drug  
[2010; 2015]  
(a) Mifepristone (b) Promethazine  
(c) Valium (d) Naproxen
4. Which one of the following is employed as Antihistamine  
[2011]  
(a) Omeprazole (b) Chloramphenicol  
(c) Diphenyl hydramine (d) Norothindrone
5. Which of the following is an analgesic  
[2016]  
(a) Novalgin (b) Penicillin  
(c) Streptomycin (d) Chloromycetin
6. Which of the following can possibly be used as analgesic without causing addiction and any modification  
[1997]  
(a) Morphine  
(b) *N*-acetylparaaminophenol  
(c) Diazepam  
(d) Tetra hydrocatenol
7. Which statement is false  
[1994]  
(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 antipyretic both
8. Antiseptics and disinfectants either kill or prevent growth of microorganisms. Identify which of the following statements is not true  
[2013]  
(a) Disinfectants harm the living tissues  
(b) A 0.2% solution of phenol is an antiseptic while 1% solution acts as a disinfectant  
(c) Chlorine and Iodine are used as strong disinfectants  
(d) Dilute solutions of Boric acid and Hydrogen Peroxide are strong antiseptics
9. Artificial sweetener which is stable under cold conditions only is  
[2014]  
(a) Aspartame (b) Alitame  
(c) Saccharine (d) Sucralose
10. Mixture of chloroxylenol and terpineol acts as  
[2017]  
(a) Analgesic (b) Antiseptic  
(c) Antipyretic (d) Antibiotic
11. Bithional is generally added to the soaps as an additive to function as a/an  
[2015]  
(a) Dryer (b) Buffering agent  
(c) Antiseptic (d) Softener

12. Which of the following could act as a propellant for rocket  
[2003]  
(a) Liquid hydrogen + Liquid nitrogen  
(b) Liquid oxygen + Liquid argon  
(c) Liquid hydrogen + Liquid oxygen  
(d) Liquid nitrogen + Liquid oxygen

## 6. AIIMS

1. The following compound is used as  
[1996; 2002; 2007]  
  
(a) An anti-inflammatory compound  
(b) Analgesic  
(c) Hypnotic  
(d) Antiseptic
2. Structurally biodegradable detergent should contain  
[1994]  
(a) Normal alkyl chain (b) Branched alkyl chain  
(c) Phenyl side chain (d) Cyclohexyl side chain

## 7. Assertion and Reason

Read the assertion and reason carefully to mark the correct option out of the options given below :

- (a) If both assertion and reason are true and the reason is the correct explanation of the assertion.  
(b) If both assertion and reason are true but reason is not the correct explanation of the assertion.  
(c) If assertion is true but reason is false.  
(d) If the assertion and reason both are false.  
(e) If assertion is false but reason is true.
1. Assertion : Fluorescein is an adsorption indicator.  
Reason : Fluorescein indicator is a dye. [AIIMS 1994]
2. Assertion : Equanil is a tranquilizer.  
Reason : Equanil is used to cure depression and hypertension.
3. Assertion : Sedatives are given to patients who are mentally agitated and violent.  
Reason : Sedatives are used to suppress the activities of central nervous system

## 35. Chemistry in Everyday Life – Answers Keys

### 1. Dyes and Pigment

1	c	2	c	3	a	4	b	5	a
6	a	7	b	8	c	9	d	10	c
11	b	12	d	13	a				

### 2. Drugs and Medicines

1	b	2	c	3	c	4	b	5	b
6	d	7	c	8	a	9	c	10	c
11	a	12	c	13	c	14	c	15	d
16	a	17	b	18	a	19	b	20	a
21	c	22	a	23	c	24	d	25	a
26	a	27	b	28	c	29	a	30	d
31	a	32	a	33	a	34	a	35	d
36	d	37	d	38	b	39	d	40	c
41	a								

### 3. Rocket - Propellant and Other

1	c	2	b	3	d	4	c	5	c
6	a	7	b	8	d	9	b	10	c
11	c	12	b	13	c	14	b	15	b

### 4. IIT-JEE/ AIEEE

1	c	2	d	3	b	4	b	5	c
6	a								

### 5. NEET/ AIPMT/ CBSE-PMT

1	c	2	a	3	c	4	c	5	a
6	b	7	c	8	d	9	a	10	b
11	c	12	c						

### 6. AIIMS

1	b	2	a						
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### 7. Assertion & Reason

1	b	2	a	3	a				
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