Classification and Nomenclature of Organic Compounds

Q.1. IUPAC name of the following compound is

$$\begin{matrix} \text{O} & \text{O} \\ \parallel & \parallel \\ \text{CH}_3 - \text{C} - \text{CH}_2 - \text{CH}_2 - \text{C} - \text{OH} \end{matrix}$$

- a) 1-hydroxypentane-1, 4-dione
- b) 1,4-dioxopentanol
- c) 1-carboxybutan-3-one
- d) 4-oxopentanoic acid

Q.2. The IUPAC name of the compound shown below is:



- a) 3-bromo-1-chlorocyclohexene
- b) 1-bromo-3-chlorocyclohexene
- c) 2-bromo-6-chlorocyclohex-1-ene
- d) 6-bromo-2-chlorocyclohexene

Q.3. Which of the following compounds has wrong IUPAC name?

a)

$$\text{CH}_3\text{--CH}_2\text{--COO--CH}_2\text{CH}_3 \rightarrow \text{ethyl butanoate}$$

b)

$$CH_3 - CH - CH_2 - CHO \rightarrow 3$$
-methyl-butanal CH_3

c)

$$CH_3$$
 - CH - CH - CH_3 \rightarrow 2-methyl-3-butanol OH CH_3

d)

$$CH_3 - CH - C - CH_2 - CH_3 \rightarrow 2$$
-methyl-3-pentanone

Q.4. The correct name for the following hydrocarbon is



- a) Tricyclo [4.1.0] heptane
- b) Bicyclo [5.2.1] heptane
- c) Bicyclo [4.1.0] heptane
- d) Bicyclo [4.1.0] hextane

- Q.5. The compound which has one isopropyl group is
 - a) 2, 2, 3, 3 Tetramethylpentane
 - b) 2, 2 Dimethylpentane
 - c) 2, 2, 3- Trimethylpentane
 - d) 2- Methypentane
- Q.6. Which of the following statements is false for isopentane?
 - a) It has three CH₃ groups
 - b) It has one CH2 group
 - c) It has one CH group
 - d) It has a carbon which is not bonded to hydrogen
- Q.7. The correct structure of trans-2 hexenal is

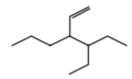
a)

b)

c)

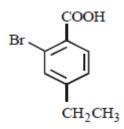
d)

Q.8. The correct IUPAC name of the compound is



- a) 4-Ethyl-3-propyl hex-1-ene
- b) 3-Ethyl-4-ethenyl heptane
- C) 3-Ethyl-4-propyl hex-1-ene
- d) 3-(1-ethylpropyl) hex-1-ene
- Q.9. The general formula $C_nH_{2n}O_2$ could be for open chain
 - a) diketones
 - b) diols
 - c) dialdehydes
 - d) carboxylic acids

- Q.10. Which of the following will have a meso isomer also?
 - a) 2, 3- Dichloropentane
 - b) 2, 3-Dichlorobutane
 - c) 2-Chlorobutane
 - d) 2-Hydroxypropanoic acid
- Q.11.The IUPAC name of CH₃OC₂H₅ is
 - a) Methyl ethyl ether
 - b) Ethyl methyl ether
 - c) Methoxyethane
 - d) Ethoxymethane
- Q.12. The IUPAC name of tert-butylchloride is
 - a) 4-chlorobutane
 - b) 2-chlorobutane
 - c) 1-chloro-3-methylpropane
 - d) 2-chloro-2-methylpropane
- Q.13. The correct decreasing order of priority for the functional groups of organic compounds in the IUPAC system of nomenclature is (in decreasing order)
 - a) COOH, -SO₃H, -CONH₂, -CHO
 - b) SO₃H, COOH, CONH₂, CHO
 - c) CHO, COOH, SO₃H, CONH₂
 - d) $CONH_2$, CHO, SO_3H , COOH
- Q.14. What is the IUPAC name of the following compound?



- a) 6 bromo 4 ethylbenzene carboxylic acid
- b) 2 bromo 4 ethylbenzene carboxylic acid
- c) Ortho bromo paraethyl benzoic acid
- d) 4 bromo 3 ethyl benzoic acid

Q.15. The correct name of the compound (IUPAC)



- a) D. D. T.
- b) Gammexane
- c) p, p'-dichloro diphenyl trichloroethane
- d) 1, 1, 1-trichloro-2, 2-bis (4-Chlorophenyl) ethane

Q.16. The IUPAC name of CH₃COCH(CH₃)₂ is

- a) 2-methyl-3-butanone
- b) 4-methylisopropyl ketone
- c) 3-methyl-2-butanone
- d) Isopropylmethyl ketone

Q.17.An organic compound X (molecular formula $C_6H_7O_2N$) has six carbon atoms in a ring system, two double bonds and a nitro group as substituent, X is

- a) Homocyclic but not aromatic
- b) Aromatic but not homocyclic
- c) Homocyclic and aromatic
- d) Heterocyclic and aromatic

Q.18. Vinylcarbinol is

- a) HO-CH₂-CH=CH₂
- b) $CH_3C(OH)=CH_2$
- c) CH₃-CH=CH-OH
- d) $CH_3-C(CH_2OH)=CH_2$

Q.19. The IUPAC name of acraldehyde is

- a) Prop-2-en-1-al
- b) Propenylaldehyde
- c) But-2-en-1-al
- d) Propenal

Q.20.The IUPAC name of CH₃CH=CHCOOC₂H₅ is

- a) Ethyl but-1-enoate
- b) Ethyl but-2-enoate
- c) Ethyl prop-2-enoate
- d) None of these

Q.21. The systematic name of (CH₃)₂CH – COOH is

- a) 2- propanoic acid
- b) isobutanoic acid
- c) 2- methylpropanoic acid
- d) 2- methylbutanoic acid

Q.22. Which of the following IUPAC names is correct?

- a) 2-Methyl-3-ethylpentane
- b) 3-Ethyl-2-methylpentane
- c) 2-Ethyl-3-methylpentane
- d) 3-Methyl-2-ethylpentane

Q.23. Which of the following represents the correct IUPAC name of the compound

$CH_2 = CH - CH_2 C1$?

- a) Allyl chloride
- b) 1- chloro -3- propene
- c) 3- chloro-1- propene
- d) Vinyl chloride

Q.24.IUPAC name of $CH_2 = CHCN$ is

- a) Ethenenitrile
- b) Vinyl cyanide
- c) Cyanoethene
- d) 2-propenenitrile

Q.25. The IUPAC name of neopentane is

- a) 2, 2-dimethylpropane
- b) 2-methylpropane
- c) 2, 2-dimethylbutane
- d) 2- methylbutane