CET Chemistry 2012

1. **Aim & Scope of Organic Chemistry**
2. **Composition of Organic compounds**
3. **Classification of Organic compounds**
4. **Polymers**

1. Which one of the following drug reduces fever?

1) Analgesics
2) Tranquilizers
3) Antipyretics
4) Antibiotics

2. Which of the following could act as a propellant for rockets

1) Liquid nitrogen + liquid oxygen
2) Liquid Hydrogen + liquid nitrogen
3) Liquid oxygen + liquid argon
4) Liquid Hydrogen + liquid oxygen

3. Which on is a broad spectrum drug?

1) Chloramphenicol
2) Chloroquine
3) Chloroxylenol
4) Plasmoquine

4)The explosive RDX is obtained by

1) Nitration of Toluene
2) Nitration of Phenol
3) Nitration of urotropine
4) Nitration of cellulose

5. Empirical formula of the compound is CH_2O. Its molecular mass is 180. Then the molecular formula will be.

1) $C_6H_{12}O_6$
2) $C_5H_{10}O_5$
3) $C_3H_6O_3$
4) $C_4H_8O_4$

6. In Kjeldahl's method ammonia from 5gm of food neutralizes $30cm^3$ of 0.1N acid. The percentage of nitrogen in the food is.

1) 8.4
2) 0.84
3) 1.68
4) 16.8

7. The compound which dose not gives Prussian blue colour in the Lassaigne's test for nitrogen is.

1) Aniline
2) Glycine
3) Urea
4) Hydrazine

8. 0.15 gram of hydrocarbon on complete combustion gives 0.44 gram of CO_2 . The % of carbon & hydrogen is

1) 80 & 20
2) 40 & 60
3) 90 & 10
4) 70 & 30

9. An organic compound contains 40% Carbon, 6.7% hydrogen and rest oxygen. The empirical formula of the compound is.

1) C_2H_2O
2) CH_2O_2
3) CH_2O
4) CHO

10. The functional group isomer of

CH_3-CH_2-CH_2-OH is

1) CH_3 -CH –CH_3
   |
   OH
2) CH_3 CO CH_3

3) CH_3- O- CH_3

4) CH_3- CH_2-O -CH_3

11. The maximum number of isomers for alkenes with a molecular formula C_4H_8 is

1) Two

2) Three

3) Four

4) Five

12. Which one of the following shows functional isomerism?

1) C_2H_4

2) C_3H_6

3) C_2H_5OH

4) CH_2Cl_2

13. Compounds CH_3-O-C_3H_7 and C_2H_5- O-C_2H_5 exhibit

1) Metamerism

2) Cis-trans isomerism

3) Chain isomerism

4) Position isomerism

14. Heterocyclic compound among the following is

1) Pyrrole

2) Benzene

3) Cyclopropane

4) Naphthalene

15. The IUPAC name of tert-butylchloride is

1) 4-chlorobutane

2) 2-Chlorobutane

3) 1-chloro-3-methylpropane

4) 2-chloro-2-methylpropane

16. The IUPAC name of $(CH_3)_2$ CH $-CH_2-CH_2-Br$ is

1) 3,3-dimethyl-1-bromopropane
2) 2-methyl-2-bromobutane
3) 1-bromopentane
4) 1-bromo-3-methylbutane

17. The IUPAC name of $CH_2= \underset{Cl}{C}- \underset{CH_3}{CH} -CH_3$ is

1) 2-chloropent-1-ene
2) 2-methyl-3-chlorobut-3-ene
3) 3-methyl-2-chlorobut-1-ene
4) 2-chloro-3-methylbut-1-ene

18. Which of the following IUPAC name is correct?

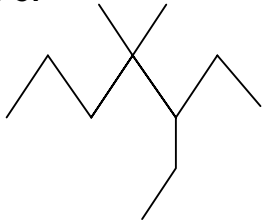
1) 2-Methyl-3-ethyl pentane
2) 2-Ethyl-3-methyl pentane
3) 3-Ethyl-2-methyl pentane
4) 3-Methyl-2-ethyl pentane

19. The IUPAC name of

$$H_3C-\ CH_2-\overset{\overset{H}{|}}{\underset{\underset{CH_3}{|}}{C}}-\overset{\overset{C_4H_9}{|}}{\underset{\underset{CH_3}{|}}{C}}-CH_3$$

1) 2-ethyl 3, 3-dimethylheptane
2) 2-butyl 2,3-dimethyl pentane
3) 2-ethyl-3,4,-dimethylheptane
4) 3,4,4-trimethyloctane

20. The IUPAC name of IS



1) 4,4-dimethyl-3-ethylheptane

2) 5-ethyl-4, 4-dimethylheptane

3) 3-ethyl-4,4-dimethylheptane

4) 1,1-diethyl-2, 2-dimethylpentane

21. The IUPAC name for the compound CH_2=CH-CH_2 -C≡CH is

1) Pent-1-en-4-yne

2) Pent-4-en-1-yne

3) Pent-2-en-4-yne

4) Pent-1-en-3-yne

22. The IUPAC name of the compound H_3C-CH=CH- C≡CH is

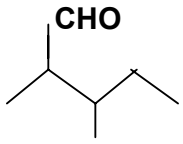
1) Pent -2 -en-4-yne

2) Pent – 3- en-1-yne

3) Pent -3-en-5-yne

4) Pent -2,4 -en-2-yne

23. The IUPAC name of



1) 2-methtyl-3-bromobutanal

2) 3-bromo-2-methylpentanal

3) 2-methyl-3-bromohexanal

4) 3-bromo-2-methylbutanal

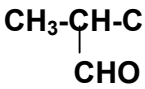
24. IUPAC name of the compound CH_3-CH_2-CH(CHO)-CH_2-COOH is

1) 3-ethyl-4-oxo-butanoic acid

2) 3-formylbutanoic acid

3) 3-pentan-3-al-1-oic acid

4) 3-formylpentanoic acid

25. IUPAC name of the compound  **is**

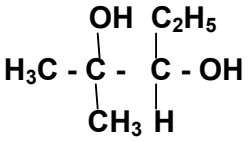
1) 3-formylbutanoic acid

2) 4-oxo-3-methylbutanoic acid

3) 3-formylpropanoic acid

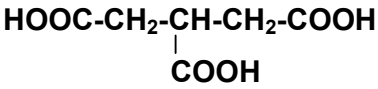
4) butan-3-al-1-oic acid

26. IUPAC name of the compound is



1) 4-methyl-1,2 –pentanediol
2) 2-methyl-2,3-pentanediol
3) 2-methyl-1,2 -hexanediol
4) 1-ethyl-2-methyl-1,2-propanediol

27. IUPAC name of the compound

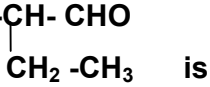


1) 3-carboxy pentanoic acid

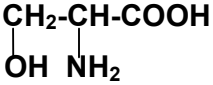
2) Propane-1,2,3-tricarboxylic acid

3) Hexane-1,3,5-trioic acid

4) Propan-1,2,3-tricarboxylic acid

28. What is the IUPAC name compound  **is**

1) Butan-2-aldehyde
2) 2-ethyl propanal
3) 2-methyl butanal
4) 2-methyl butanol

29 **What is the IUPAC name of the compound** 

1) 1-hydroxy-2-amino-3-propanoic acid

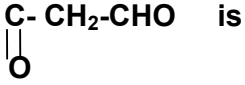
2) 3-hydroxy-2-aminopropanoic acid

3) 2-amino-3-hydroxypropanoic acid

4) 1-amino-2-hydroxypropanoic acid

30 The correct IUPAC name for the compound $(CH_3)_3COH$ is:

1) Trimethylmethan -1-ol
2) 1,1,1-Trimethylmethan -1-ol
3) 1-Butanol
4) 2-Methylpropan-2-ol

31 The IUPAC name for the compound  **is**

1) 3-Keto-1-butanal
2) 3-0xobutanal
3) 4-oxo-2-butanone
4) 4-formyl-2-butanone

32 Gutlapercha, a thermoplastic is

1) A type of nylon sheet.
2) Synthetic rubber
3) An isomer of natural rubber
4) Thread of terylene

33 Zeigler-Natta catalyst is used in making

1) LDPE
2) HDPE
3) Polystyrene
4) Nylon-66

34 The monomer of Buna-s rubber are

1) Styrene & butadiene
2) Isoprene & butadiene
3) Vinyl chloride & sulphur
4) Butadiene

35 Which of the following is not a homopolymer?

1) Bakelite
2) Polyethylene

3) Teflon

4) PVC

36 The condensation polymer among the following is

1) PVC

2) Polythene

3) Rubber

4) Protein

37 In Lassaigne's test thiourea is converted into

1) NaCN

2) Na_2S

3) Na_2SO_4

4) NaCNS

38 Which of the following are isomers

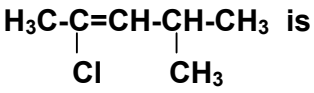
1) Propanone & Ethanol

2) Methylalcohal & Dimethyl ether

3) Propanoic acid & Acetone

4) Acetic acid & methyl formate

39 The IUPAC name of



is

1) 2-Chloro-4-methyl-2-pentene

2) 4-Chloro-2-methyl-2-pentene

3) 4-methyl-2-chloro-2-pentene

4) 2-Chloro-4,4-dimethyl-2-butene

40 The correct decreasing order of priority for the functional groups of organic compounds in the IUPAC system of nomenclature is

1) -CHO, -COOH, -COOR, $-CONH_2$

2) $-CONH_2$, -CHO, - COOR, -COOH

3) -COOH, - COOR, $-CONH_2$, -CHO

4) -COOR, -COOH, $-CONH_2$ -CHO

41 Household gaseous fuel (LPG) mainly contains

1) C_2H_2
2) CH_4
3) C_4H_{10}
4) C_2H_4

42 Paracetmol is a/an:

1) Analgesics
2) Antipyretics
3) Antimaterial
4) Both antipyretic and analgesic

43 During Lassaigns test for nitrogen using sodium fusion extract the nitrogen of organic compound gets converted into blue colour.

1) Sodium nitride
2) Sodium cyanide
3) Sodium ferro cyanide
4) Ferric ferrocyanide

44 In the Lassaigne's test for sulphur in the organic compound with sodium nitoprusside solution the purple color formed is due to

1) $Na_4[Fe(CN)_5\,NOS]$
2) $Na_3(Fe(CN)_5\,]$
3) $Na_2[Fe(CN)_5\,NOS]$
4) $Na_3[Fe(CN)_6]$

45 Natural rubber is made up of

1) Cis 1,2- isoprene units
2) Cis 1,3- isoprene units
3) Cis 1,4- isoprene units
4) Cis 1,5- isoprene units

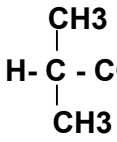
46 The alkane with molecular formula C_7H_{14} exhibit

1) Chain isomerism
2) Optical isomerism
3) Position isomerism
4) Both chain & optical isomerism

47 The IUPAC name of $CH_3\ COOCH_3$ is

1) Ethyl methanote
2) Methyl acetate
3) Methyl methanote
4) Methyl ethanote

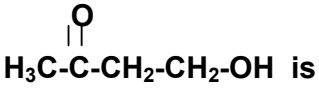
48 The IUPAC name of



is

1) Iso butryic acid
2) 2-methylpropanoic acid
3) Tertiary bytyric acid
4) Butanoic acid

49 The IUPAC name of the compound



is

1) 3-oxobutan-1-ol
2) 1-hydroxy butan-3-one
3) 4-hydroxy butan-2-one
4) 2-oxobutan-4-ol

50 In Lassaigne's test thiourea is converted into

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