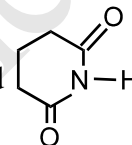


EXERCISE-1

Q.1 Compound having open chain is -
 (1) Pentane (2) Isopentane (3) Neopentane (4) All the above

Q.2 In unsaturated compound have –
 (1) Carbon - carbon double bond (2) Carbon - carbon triple bond
 (3) Carbon - carbon double and triple bond (4) Carbon - oxygen double bond

Q.3 No. of heteroatoms (other than C) present in the following heterocyclic compound



is –

(1) 3 (2) 2 (3) 1 (4) 0

Q.4 Alicyclic compound is
 (1) Aromatic compound (2) Aliphatic compound
 (3) Hetero cyclic compound (4) Aliphatic cyclic compound

Q.5 Which is an acyclic compound :
 (1) Methane (2) Benzene (3) Pyrrole (4) Cyclobutane

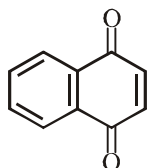
Q.6 The group of heterocyclic compounds is ;
 (1) Phenol, Furan (2) Furan, Thiophene (3) Thiophene, Phenol (4) Furan, Aniline

Q.7 C_5H_{12} gives ___ types of alkyl groups.
 (1) 5 (2) 8 (3) 6 (4) 4

Q.8 The total number of secondary H-atoms in the structure given below are :
 $(CH_3)_2CHCH_2C_2H_5$
 (1) 1 (2) 4 (3) 3 (4) 2

Q.9 iso-octane contains
 (1) 5 prim. one sec. & two ter. C atoms. (2) 4 prim. 2 sec. & one ter. C atoms.
 (3) 5 ($1^{\circ}C$). one ($2^{\circ}C$), one ($3^{\circ}C$) & one ($4^{\circ}C$) atoms.
 (4) 5 ($1^{\circ}C$). two ($2^{\circ}C$), one ($3^{\circ}C$) & one ($4^{\circ}C$) atoms.

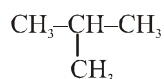
Q.10 The number of σ and π bonds in the following molecule is respectively :



(1) 19 σ bonds, 6 π bonds (2) 20 σ bonds, 5 π bonds

(3) 19 σ bonds, 5 π bonds(4) 20 σ bonds, 6 π bonds

Q.11 Find the number of 1°, 2° & 3° hydrogen atoms in the following compounds :

(1) 1° H \rightarrow 9, 3° H \rightarrow 1(2) 1°H \rightarrow 6, 2°H \rightarrow 2(3) 1°H \rightarrow 6, 2°H \rightarrow 4(4) 1°H \rightarrow 9, 2°H \rightarrow 1

Q.12 How many 1° carbon atom will be present in a simplest hydrocarbon having two 3° and one 2° carbon atom?

(1) 3

(2) 4

(3) 5

(4) 6

Q.13 How many carbons are in simplest alkyne having two side chains?

(1) 5

(2) 6

(3) 7

(4) 8

Q.14 Which of the following pairs have absence of carbocyclic ring in both compounds?

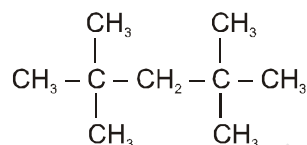
(1) Pyridine, Benzene

(2) Benzene, Cyclohexane

(3) Cyclohexane, Furane

(4) Furane, Pyridine

Q.15 The number of 1° carbon of following compound is



(1) 5

(2) 6

(3) 8

(4) 4

Q.16 How many secondary carbon atoms does methyl cyclopropane have?

(1) None

(2) One

(3) Two

(4) Three

Q.17 Which of the following is the first member of ester homologous series?

(1) Ethyl ethanoate

(2) Methyl ethanoate

(3) Methyl methanoate

(4) Ethyl methanoate

Q.18 In homologous series :

(1) Molecular formula is same

(2) Structural formula is same

(3) Physical properties are same

(4) General formula is same

Q.19 Which of the following is the first member of ester homologous series ?

(1) Ethyl ethanoate

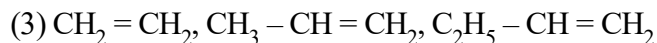
(2) Methyl ethanoate

(3) Methyl methanoate

(4) Ethyl methanoate

Q.20 Which of the following is the triad of a homologous series -

(1) CH_3NH_2 , $(\text{CH}_3)_2\text{NH}$, $(\text{CH}_3)_3\text{N}$ (2) $\text{C}_2\text{H}_5\text{OH}$, $(\text{CH}_3)_2\text{CHOH}$, $(\text{CH}_3)_3\text{COH}$



(4) Both (2) and (3)

Q.21 What is not true about homologous series ?

- (1) All the members have similar chemical properties
 (2) They have identical physical properties
 (3) They can be represented by a general formula
 (4) Adjacent members differ in molecular mass by 14

Q.22 The IUPAC name of $\text{CH}_3\text{CH}_2 - \underset{\text{CH}_3}{\text{N}} - \text{CH}_2\text{CH}_3$ is:

- (1) N-Methyl-N-ethyl ethanamine
 (2) Diethyl methanamine
 (3) N-Ethyl-N-methyl ethanamine
 (4) Methyl diethyl ethanamine

Q.23 The correct IUPAC name of $\text{CH}_3 - \text{CH}_2 - \underset{\text{CH}_2}{\text{C}} - \text{COOH}$ is:

- (1) 2-Methyl butanoic acid
 (2) 2-Ethylprop-2-enoic acid
 (3) 2-Carboxybutene
 (4) None of the above

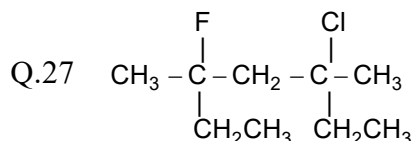
Q.24 Which of the following compound is wrongly named?

(1) $\text{CH}_3\text{CH}_2\text{CH}_2\underset{\text{Cl}}{\text{CH}}\text{COOH}$; 2-Chloro pentanoic acid(2) $\text{CH}_3\text{C} \equiv \underset{\text{CH}_3}{\text{C}}\text{CHCOOH}$; 2-Methyl hex-3-enoic acid(3) $\text{CH}_3\text{CH}_2\text{CH}=\text{CHCOCH}_3$; Hex-3-en-2-one(4) $\text{CH}_3 - \underset{\text{CH}_3}{\text{CH}}\text{CH}_2\text{CH}_2\text{CHO}$; 4-Methyl pentanalQ.25 I.U.P.A.C. name of $(\text{CH}_3)_2\text{CH}-\text{CH}_2-\text{CH}_2\text{Br}$ is

- (1) 1-bromo pentane
 (2) 2-methyl-4-bromo pentane
 (3) 1-bromo-3-methyl butane
 (4) 2-methyl-3-bromo propane

Q.26 Which one of the following I.U.P.A.C. name is correct ?

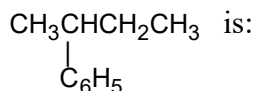
- (1) 2-Methyl-3-ethyl pentane
 (2) 2-Ethyl-3-methyl pentane
 (3) 3-Ethyl-2-methyl pentane
 (4) 3-Methyl-2-ethyl pentane



The IUPAC name of this compound is :

- (1) 2-fluoro-4-chloro-2,4-diethyl pentane
- (2) 3-fluoro-5-chloro-3-methyl-5-ethyl hexane
- (3) 3-chloro-5-fluoro-3,5-dimethyl heptane
- (4) 3,5-dimethyl-5-fluoro-3-chloro heptane

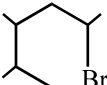
Q.28 The IUPAC name of the compound



- | | |
|-------------------------|---------------------|
| (1) 2-cyclohexyl butane | (2) 2-phenyl butane |
| (3) 3-cyclohexyl butane | (4) 3-phenyl butane |

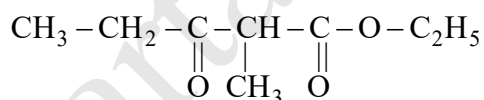
Q.29 The IUPAC name of $\text{C}_6\text{H}_5 - \underset{\text{C}_6\text{H}_5}{\text{CH}} - \text{CH}_2 - \text{CCl}_3$ is ;

- (1) 1,1,1-trichloro-3,3-diphenyl propane
- (2) 1,1-diphenyl-3,3,3-trichloro propane
- (3) both (1) and (2)
- (4) none of these

Q.30 The IUPAC name of  is -

- | | |
|---------------------------------|---------------------------------|
| (1) 2-bromo-4-isopropylpentane | (2) 2, 3-dimethyl-5-bromohexane |
| (3) 2-bromo-4, 5-dimethylhexane | (4) 5-bromo-2, 3-dimethylhexane |

Q.31 IUPAC name of:

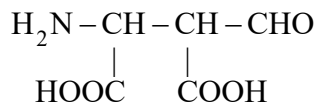


- | | |
|-------------------------------------|-------------------------------------|
| (1) Ethyl-4-methyl-3-oxo pentanoate | (2) 2-Ethoxy carbonyl pentan-3-one |
| (3) 4-Ethoxy carbonyl pentan-3-one | (4) Ethyl 2-methyl 3-oxo-pentanoate |

Q.32 The IUPAC name of compound $\text{CH}_3 - \underset{\text{NH}_2}{\underset{|}{\text{C}}} = \text{C} - \underset{\text{Cl}}{\underset{|}{\text{C}}} - \text{H}$ is:

- (1) 2-Amino-3-chloro-2-methylpent-2-enoic acid
- (2) 3-Amino-4-chloro-2-methylpent-2-enoic acid
- (3) 4-Amino-3-chloro-2-methylpent-2-enoic acid
- (4) All of the above

Q.33 The IUPAC name of the structure is:



- (1) 3-Amino-2-formyl butane-1, 4-dioic acid (2) 3-Amino-2, 3-dicarboxy propanal
(3) 2-Amino-3-formyl butane-1, 4-dioic acid (4) 1-Amino-2-formyl succinic acid

Q.34 The IUPAC name of $\text{C}_6\text{H}_5\text{CH}=\text{CH}-\text{COOH}$ is:

- (1) Cinnamic acid (2) 1-Phenyl-2-carboxy ethane
(3) 3-Phenyl prop-2-enoic acid (4) Dihydroxy-3-phenyl propionic acid

Q.35 The IUPAC name of $\text{BrCH}_2-\text{CH}-\text{CO}-\text{CH}_2-\text{CH}_2\text{CH}_3$ is:



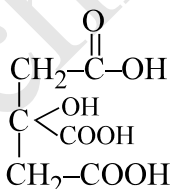
- (1) 2-Bromomethyl-3-oxohexanamide (2) 1-Bromo-2-amino-3-oxohexane
(3) 1-Bromo-2-amino-n-propyl ketone (4) 3-Bromo-2-propyl propanamide

Q.36 IUPAC name will be $\text{CH}_2-\text{CH}-\text{CH}_2$



- (1) 1,2,3-Tricyano propane (2) Propane-1,2,3- trinitrile
(3) 1,2,3-Cyano propane (4) Propane-1,2,3-tricarbonitrile

Q.37 The IUPAC name of compound



- (1) 1,2,3-Tricarboxypropan-2-ol
(2) 2-Hydroxy propane-1,2,3- tricarboxylic acid
(3) 3-Hydroxy-3-carboxypentane-1,5-dioic acid
(4) None

Q.38 The IUPAC name of $\text{CH}_3-\text{C}-\text{O}-\text{CH}_2-\text{C}-\text{OH}$ is:



- (1) 1-Acetoxy acetic acid (2) 2-Acetoxy ethanoic acid
(3) 2-Ethanoyloxyacetic acid (4) 2-Ethanoyloxyethanoic acid

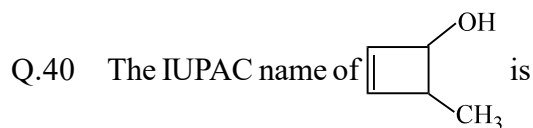
Q.39 $\text{CH}_3-\text{O}-\text{C}-\text{CH}_2-\text{COOH}$



The correct IUPAC systematic name of the above compound is:

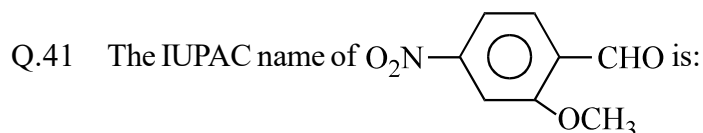
- (1) 2-Acetoxy ethanoic acid
 (3) 3-Methoxy formyl ethanoic acid

- (2) 2-Methoxy carbonyl ethanoic acid
 (4) 2-Methoxy formyl acetic acid



- (1) 3-Methyl cyclobut-1-ene-2-ol
 (3) 4-Methyl cyclobut-1-ene-3-ol

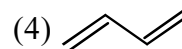
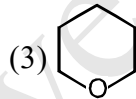
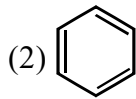
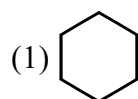
- (2) 4-Methyl cyclobut-2-ene-1-ol
 (4) 2-Methyl cyclobut-3-ene-1-ol



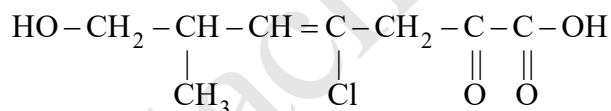
- (1) 2-Methoxy-4-nitro benzaldehyde
 (3) 3-Methoxy-4-formyl nitro benzene

- (2) 4-Nitro anisaldehyde
 (4) 2-Formyl-4-nitro anisole

Q.42 Identify the compound which is homocyclic, aromatic, and unsaturated?



Q.43 The suffix of the principal group, the prefixes for the other groups and the name of the parent in the structure



- (1) -oic acid, chloro, hydroxy, oxo, methyl, hept-4-ene
 (2) -oic acid, chloro, hydroxy, methyl, oxo, hept-4-ene
 (3) -one, carboxy, chloro, methyl, hydroxy, hept-4-ene
 (4) -one, carboxy, chloro, methyl, hydroxy, hept-4-ene

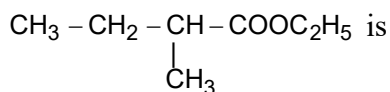
Q.44 The I.U.P.A.C. name of $(\text{C}_2\text{H}_5)_2\text{CH}\cdot\text{CH}_2\text{OH}$ is

- (1) 2-ethyl butanol-1
 (3) 2-ethyl pentanol-1
- (2) 2-methyl pentanol-1
 (4) 3-ethyl butanol-1

Q.45 The correct name of 3,3-dimethyl propanamide is

- (1) 2-methyl butanamide
 (3) iso-propyl ethanamide
- (2) 3-methyl butanamide
 (4) iso propyl acetamide

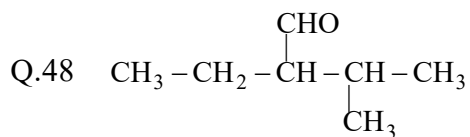
Q.46 The IUPAC name of



- (1) 2-ethyl-ethyl acetate (2) ethyl 3-methyl butanoate
 (3) ethyl 2-methyl butanoate (4) 2-methyl butanoic acid ethyl ester

Q.47 The IUPAC name of $\text{N} \equiv \text{C} - \text{CH}_2 - \text{CH}_2 - \text{OH}$ is;

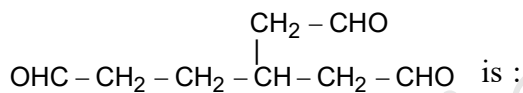
- (1) 1-hydroxy ethanenitrile (2) 3-hydroxy propanenitrile
 (3) 2-hydroxy ethyl cyanide (4) 1-hydroxy-2-cyanoethane



The IUPAC name of this compound is

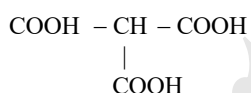
- (1) 2-isopropyl butanal (2) 2-ethyl-3-methyl butanal
 (3) 3-ethyl-2-methyl butanal (4) 2-methyl pentane-3-aldehyde

Q.49 The IUPAC name of



- (1) 4, 4-di(formylmethyl) butanal (2) 2-(formylmethyl) butane-1, 4-dicarbaldehyde
 (3) hexane-3-acetal-1, 6-dial (4) 3-(formylmethyl) hexane-1, 6-dial

Q.50 The IUPAC name of compound



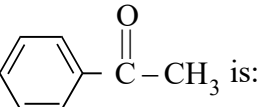
- (1) Tricarboxy methane (2) Propane trioic acid
 (3) Tributanoic acid (4) 2- carboxy propanedioic acid

Q.51 The IUPAC name of  is -

- (1) 4-oxo-2-pentanol (2) 4-hydroxy-2-pentanone
 (3) pentane-4-ol-2-one (4) pentane-2-one-4-ol

Q.52 Which of the following is crotonic acid:

- (1) $\text{CH}_2 = \text{CH} - \text{COOH}$ (2) $\text{C}_6\text{H}_5 - \text{CH} = \text{CH} - \text{COOH}$
 (3) $\text{CH}_3 - \text{CH} = \text{CH} - \text{COOH}$ (4) $\text{CH} = \text{COOH}$
 $\quad \quad \quad \parallel$
 $\quad \quad \quad \text{CH} - \text{COOH}$

Q.53 The IUPAC name of  is:

- (1) Phenyl ethanone (2) Methyl phenyl ketone
(3) Acetophenone (4) Phenyl methyl ketone

Q.54 Structural formula of isopropyl methanoate is:

- (1) $\text{CH}_3 - \underset{\text{O}}{\parallel}{\text{C}} - \text{O} - \underset{\text{CH}_3}{\text{CH}} - \text{CH}_3$ (2) $\text{H} - \underset{\text{O}}{\parallel}{\text{C}} - \text{O} - \text{CH}_2 - \underset{\text{CH}_3}{\text{CH}} - \text{CH}_3$
(3) $\text{CH}_3 - \underset{\text{O}}{\parallel}{\text{C}} - \text{O} - \text{CH}_2 - \underset{\text{CH}_3}{\text{CH}_2}$ (4) $\text{H} - \underset{\text{O}}{\parallel}{\text{C}} - \text{O} - \underset{\text{CH}_3}{\text{CH}} - \text{CH}_3$

Q.55 The I.U.P.A.C name of the compound having structure $\text{C}_2\text{H}_5 - \underset{\text{CH}_2}{\parallel}{\text{C}} - \underset{\text{CH}_3}{\text{CH}} - \text{CH}_3$ is

- (1) 3-methyl-2-ethyl butene-1 (2) 2-ethyl-3-methyl butene-1
(3) 3-ethyl-3-methyl butene-1 (4) ethyl isopropyl ethene

Q.56 The IUPAC name of $\text{CH}_2 = \text{CH} - \text{C} \equiv \text{CH}$ is –

- (1) 1-Butenyne-3 (2) 1-Butynene-3 (3) Vinyl acetylene (4) all of them

Q.57 The correct IUPAC name of 2-ethyl-3-pentyne is :

- (1) 3-methyl hexyne-4 (2) 4-ethyl pentyne-2
(3) 4-methyl hexyne-2 (4) None of these

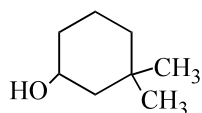
Q.58 The I.U.P.A.C. name of following structure $(\text{CH}_3)_2\text{C}(\text{C} \equiv \text{C})\text{C}(\text{CH}_3)\text{CH}(\text{CH}_3)$ is -

- (1) 3-methyl-4-hexynene-2 (2) 3-methyl-2-hexenyne-4
(3) 4-methyl-4-hexenyne-4 (4) all are correct

Q.59 The IUPAC name of β -ethoxy- α -hydroxy propionic acid (trivial name) is:

- (1) 1,2-Dihydroxy-1-oxo-3-ethoxy propane
(2) 1-Carboxy-2-ethoxy ethanol
(3) 3-Ethoxy-2-hydroxy propanoic acid
(4) All above

Q.60 The IUPAC name of the given compound is:



- (1) 1,1-Dimethyl-3-hydroxy cyclohexane
(2) 3,3-Dimethyl-1-hydroxy cyclohexane

(3) 3,3-Dimethylcyclohexanol

(4) 1,1-Dimethylcyclohexan-3-ol

ANSWER KEY

Q.1	4	Q.2	3	Q.3	3	Q.4	4	Q.5	1	Q.6	2	Q.7	2
Q.8	2	Q.9	3	Q.10	1	Q.11	1	Q.12	2	Q.13	2	Q.14	4
Q.15	2	Q.16	3	Q.17	3	Q.18	4	Q.19	3	Q.20	4	Q.21	2
Q.22	3	Q.23	2	Q.24	2	Q.25	3	Q.26	3	Q.27	3	Q.28	2
Q.29	1	Q.30	4	Q.31	4	Q.32	2	Q.33	3	Q.34	3	Q.35	1
Q.36	4	Q.37	2	Q.38	4	Q.39	2	Q.40	2	Q.41	1	Q.42	2
Q.43	2	Q.44	1	Q.45	2	Q.46	3	Q.47	2	Q.48	2	Q.49	4
Q.50	4	Q.51	2	Q.52	3	Q.53	1	Q.54	4	Q.55	2	Q.56	1
Q.57	3	Q.58	2	Q.59	3	Q.60	3						

