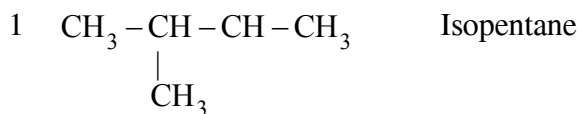
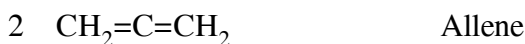


-ESSENTIAL COMMON NAMES-

ALKANE



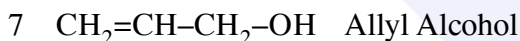
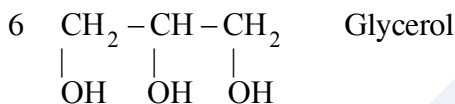
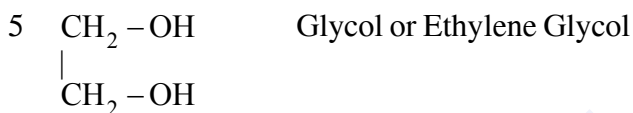
ALKENE



ALKYL HALIDE



ALCOHOL



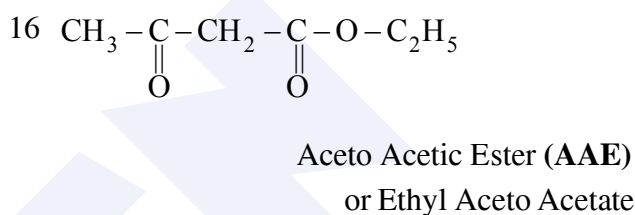
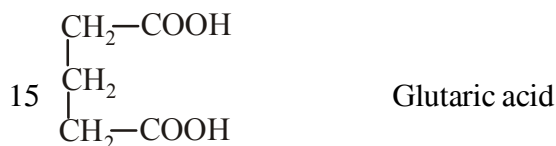
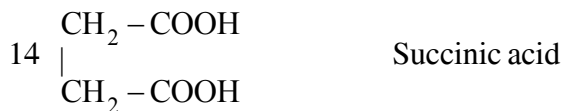
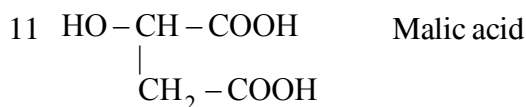
ETHER



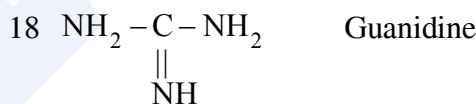
KETONE



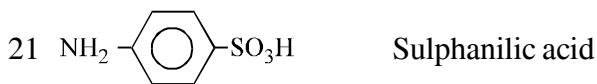
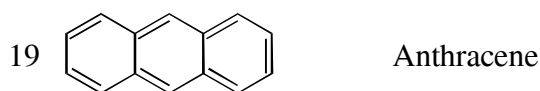
CARBOXYLIC ACID

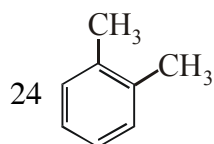


N-DERIVATIVES

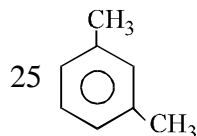


AROMATIC COMPOUNDS

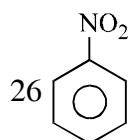




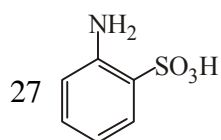
o-xylene



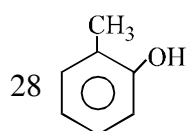
m-xylene



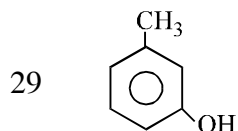
Nitrobenzene (oil of mirbane)



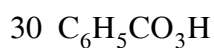
Ortho-aniline



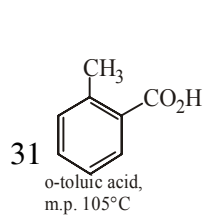
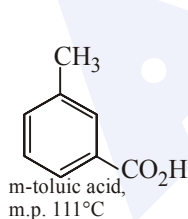
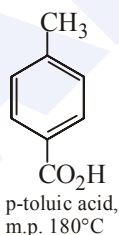
o-Cresol



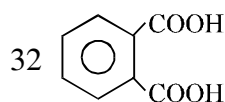
m-Cresol



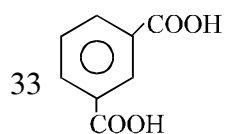
Perbenzoic acid

o-toluic acid,
m.p. 105°Cm-toluic acid,
m.p. 111°Cp-toluic acid,
m.p. 180°C

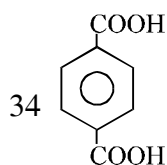
Toluic acids



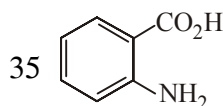
Phthalic acid



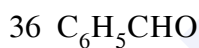
Isophthalic acid



Terephthalic acid

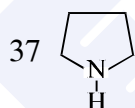


Anthranilic acid (o-aminobenzoic acid)

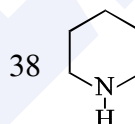


Benzaldehyde

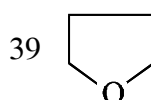
HETEROCYCLIC COMPOUNDS



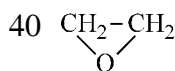
Pyrrolidine



Piperidine

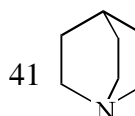


Tetrahydrofuran (THF)

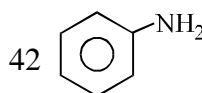


Oxirane or Ethylene Oxide or

Oxo Cyclo Propane



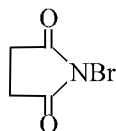
Quinuclidine



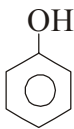
Aniline

SOME REAGENTS

- 43 Grignard's reagent RMgX
- 44 NBS N-Bromosuccinimide

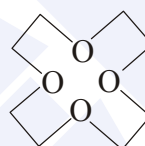


POLAR PROTIC SOLVENTS

- 45 $\text{H}-\text{O}-\text{H}$ Water
- 46 $\text{R}-\text{O}-\text{H}$ Alcohol
- 47  Phenol
- 48 $\text{CH}_3-\text{C}(=\text{O})-\text{OH}$ Acetic acid
- 49 HF Hydrogen Fluoride
- 50 NH_3 Ammonia

POLAR APROTIC SOLVENTS

- 51 DMS Dimethyl sulphide $\text{CH}_3-\text{S}-\text{CH}_3$
- 52 DMSO Dimethyl sulphoxide $\text{Me}_2\text{S}=\text{O}$
- 53 HMPT Hexamethylphosphoramide
or
HMPTA $\text{O}=\text{P}-(\text{NMe}_2)_3$
- 54 DMF Dimethyl formamide
- $\text{H}-\text{C}(=\text{O})-\text{NMe}_2$
- 55 Crown ethers Cyclic polyethers



(12 - C - 4)

-DESIRABLE COMMON NAMES-**ALKANES**

- 1 $\begin{array}{c} \text{CH}_3 \\ | \\ \text{CH}_3 - \text{C} - \text{CH} - \text{CH}_3 \\ | \quad | \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$ Triptane
- 2 $\begin{array}{c} -\text{CH}_2 - \text{CH}_2 - \text{CH} - \text{CH}_3 \\ | \\ \text{CH}_3 \end{array}$ Isopentyl Group

ALKENES

- 3 $\text{CH}_3 - \text{CH}_2 - \text{CH} = \text{CH}_2$ α -Butylene
- 4 $\text{CH}_3 - \text{CH} = \text{CH} - \text{CH}_3$ β -Butylene
- 5 $\begin{array}{c} \text{CH}_3 - \text{C} = \text{CH}_2 \\ | \\ \text{CH}_3 \end{array}$ Iso Butylene

ALKYNES

- 6 $\text{HC} \equiv \text{CH}$ Purified Acetylene or Norcelyne
- 7 $\text{CH}_3 - \text{C} \equiv \text{CH}$ Allylene

ETHER

- 8 $\text{CH}_3\text{CH}(\text{OCH}_3)_2$ Methylal

ALDEHYDE

- 9 $\begin{array}{c} \text{CHO} \\ | \\ \text{COOH} \end{array}$ Glyoxalic acid
- 10 $\begin{array}{c} \text{CH}_3 \\ | \\ \text{CH}_3 - \text{C} - \text{CHO} \\ | \\ \text{CH}_3 \end{array}$ Pivaldehyde
or
 $(\text{CH}_3)_3\text{C} - \text{CHO}$

- 11 $(\text{CH}_3)_2\text{CHCHO}$ Isobutyraldehyde

- 12 $\begin{array}{c} \text{CH}_3 - \text{C} - \text{C} - \text{CH}_3 \\ || \quad || \\ \text{O} \quad \text{O} \end{array}$ Dimethyl Glyoxal

- 13 $\begin{array}{c} \text{CH}_3 - \text{C} - \text{C} - \text{H} \\ || \quad || \\ \text{O} \quad \text{O} \end{array}$ Methyl Glyoxal or Pyruvialdehyde

KETONE

- 14 $\begin{array}{c} \text{CH}_3 \\ | \\ \text{C} = \text{CH} - \text{C} - \text{CH} = \text{C} \\ | \quad || \quad | \\ \text{CH}_3 \quad \text{O} \quad \text{CH}_3 \end{array}$ Phorone

- 15 $\begin{array}{c} \text{CH}_3 \\ | \\ \text{C} = \text{CH} - \text{C} - \text{CH}_3 \\ | \quad || \\ \text{CH}_3 \quad \text{O} \end{array}$ Mesityl Oxide

- 16 $\text{H}_2\text{C} = \text{C} = \text{O}$ Ketene

CARBOXYLIC ACID

- 17 $\text{CH}_3 - \text{CO} - \text{COOH}$ Pyruvic Acid

- 18 $\begin{array}{c} \text{C}_6\text{H}_5 - \text{CH} - \text{COOH} \\ | \\ \text{OH} \end{array}$ Mandelic Acid

- 19 NH_2COOH Carbamic Acid
(Amino formic Acid)

- 20 $\begin{array}{c} \text{COOH} \\ | \\ \text{COOH} \end{array}$ Oxalic acid

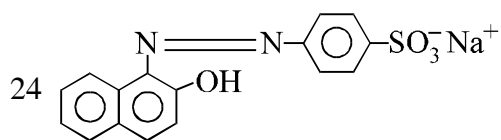
ACID DERIVATIVES

- 21 $\begin{array}{c} \text{Cl} - \text{C} - \text{C} - \text{Cl} \\ || \quad || \\ \text{O} \quad \text{O} \end{array}$ Oxalyl Chloride

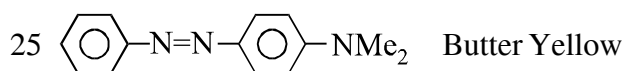
- 22 $\text{NH}_2\text{COONH}_4$ Ammonium Carbamate

- 23 $\begin{array}{c} \text{NH}_2 - \text{C} - \text{C} - \text{NH}_2 \\ || \quad || \\ \text{O} \quad \text{O} \end{array}$ Oxanamide

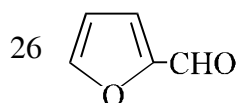
AROMATIC COMPOUNDS



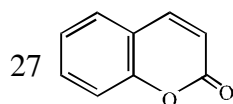
Orange II



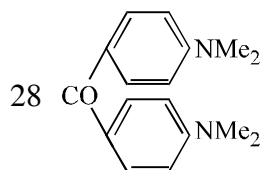
Butter Yellow



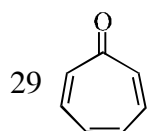
Furfural



Coumarine

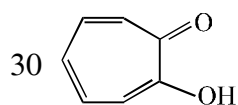


Michler's Ketone



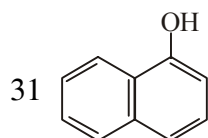
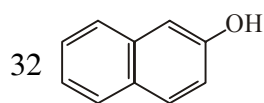
Tropone

(Cycloheptatrienone)

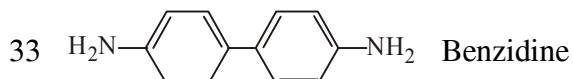


Tropolone

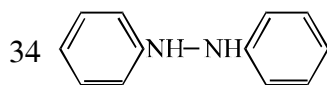
(Cycloheptatrienolone)

 α -naphthol

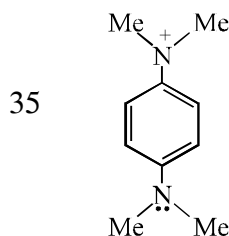
β-naphthol



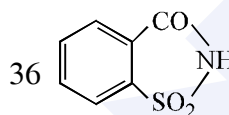
Benzidine



Hydrazobenzene



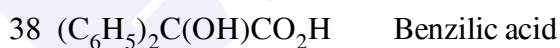
Wurster salts



Saccharin (o-sulphobenzoic imide)

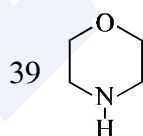


Benzil

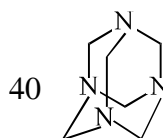


Benzilic acid

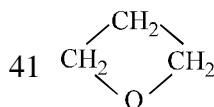
HETEROCYCLIC COMPOUNDS



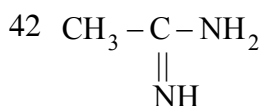
Morpholine



Hexa-methylenetetramine or Urotropine



Oxitane



Amidine

SOME REAGENTS

- 43 LAH Lithium aluminium
hydride : LiAlH_4
- 44 SBH Sodium borohydride
 NaBH_4
- 45 PCC Pyridinium chlorochromate



- 46 Raney Nickel Ni-Al alloy
- 47 Wilkinson's
Tris(Triphenylphosphine)
catalyst chlororhodium (I)
 $(\text{PPh}_3)_3\text{Rh}^+\text{Cl}^-$
- 48 Bayer's reagent 1% dil. alkaline
aq.sol. of KMnO_4

- 49 Braddy's reagent $\text{H}_2\text{N}-\text{NH}-$
2,4 DNP

- 50 Liemieux reagent $\text{NaIO}_4 + \text{dil. alk. KMnO}_4$

- 51 TEL Tetra ethyl lead

- 52 Gillman's reagent $\text{R}_2\text{CuLi}/[\text{R}_2\text{Cu}]^- \text{Li}^+$

- 53 Tollen's reagent alk. sol. of AgNO_3

- 54 Fehling's reagent alk. sol. of CuSO_4

- 55 Hinsberg's reagent

SOME GROUPS

- 56 Ts Tosyl

- 57 Ms Mesyl

- 58 Ac Acyl

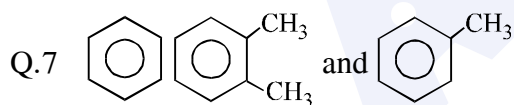
- 59 Bs Brosyl

- 60 Tf Triflate

NOMENCLATURE OF ORGANIC COMPOUND AND COMMON NAMES

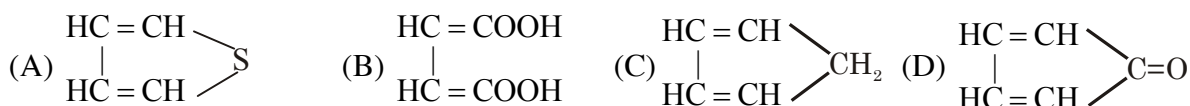
EXERCISE-S-I

- Q.1 How many 1° carbon atom will be present in a simplest open chain hydrocarbon having two 3° and one 2° carbon atom ?
 (A) 3 (B) 4 (C) 5 (D) 6
- Q.2 Alicyclic compounds are :
 (A) Aromatic compounds (B) Aliphatic cyclic compounds
 (C) Heterocyclic compounds (D) None of the above
- Q.3 How many 1° , 2° , 3° C atoms does 1, 3, 5-Trimethyl cyclohexane have?
 (A) 3, 6, 0 (B) 3, 4, 2 (C) 0, 3, 6 (D) 3, 3, 3
- Q.4 The compound which has one isopropyl group is:
 (A) 2,2,3,3-Tetramethyl pentane (B) 2,2-Dimethyl pentane
 (C) 2,2,3-Trimethyl pentane (D) 2-Methyl pentane
- Q.5 Which of the following is the first member of ester homologous series?
 (A) Ethyl ethanoate (B) Methyl ethanoate
 (C) Methyl methanoate (D) Ethyl methanoate
- Q.6 A group closely related compounds which can be expressed by a general formula & in which two consecutive members differ by 14 in their molecular masses is called
 (A) a heterogeneous series (B) a homologous series
 (C) a homogeneous series (D) a electrochemical series




Number of secondary carbon atoms present in the above compounds are respectively:

- (A) 6,4,5 (B) 4,5,6 (C) 5,4,6 (D) 6,2,1
- Q.8 The molecular formula of the first member of the family of alkenynes and its name is given by the set
 (A) C_3H_6 , Alkene (B) C_5H_6 , Pent-1-en-3-yne
 (C) C_6H_8 , Hex-1-en-5-yne (D) C_4H_4 , Butenyne
- Q.9 Which of the following is a heterocyclic compound :

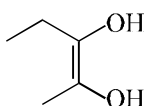


Q.10 The correct IUPAC name of the compound $\text{CH}_3 - \text{CH}_2 - \overset{\text{CH}_3}{\underset{\text{C}_2\text{H}_5}{\text{C}}} = \text{C} - \underset{\text{C}_2\text{H}_5}{\text{CH}} - \overset{\text{CH}_3}{\text{C}} - \text{CH}_2 - \text{CH}_2 - \text{CH}_3$:

- (A) 5-Ethyl-3, 6-dimethyl non-3-ene (B) 5-Ethyl-4, 7-dimethyl non-3-ene
(C) 4-Methyl-5, 7-diethyl oct-2-ene (D) 2,4-Ethyl-5-methyl oct-2-ene

Q.11 The IUPAC name of  $\text{CH} = \text{CH} - \underset{\text{CH}_3}{\text{CH}} \text{CH}_2 \text{CH}_3$ is:

- (A) 1-Cyclohexyl-3-methyl pent-1-ene (B) 3-Methyl-5-cyclohexyl pent-1-ene
(C) 1-Cyclohexyl-3-ethyl but-1-ene (D) 1-Cyclohexyl-3,4-dimethyl but-1-ene

Q.12 IUPAC name of  is:

- (A) But-2-ene-2,3-diol (B) Pent-2-ene-2,3-diol
(C) 2-Methylbut-2-ene-2,3-diol (D) Pent-3-ene-3,4-diol

Q.13 IUPAC name of $\text{CH}_2 = \text{CH} - \text{CN}$ is:

- (A) Ethenenitrile (B) Vinyl cyanide (C) Cyano ethene (D) Prop-2-enenitrile

Q.14 The IUPAC name of $\text{CH}_3 \text{CH}_2 - \underset{\text{CH}_3}{\text{N}} - \text{CH}_2 \text{CH}_3$ is:

- (A) N-Methyl-N-ethyl ethanamine (B) Diethyl methanamine
(C) N-Ethyl-N-methyl ethanamine (D) Methyl diethyl ethanamine

Q.15 The IUPAC name of acetyl acetone is :

- (A) Pentane-2,5- dione (B) Pentane -2,4-dione
(C) Hexane-2,4-dione (D) Butane-2,4-dione

Q.16 When vinyl & allyl are joined each other, we get

- (A) Conjugated alkadiene (B) cumulative alkadiene
(C) Isolated alkadiene (D) Allenes

Q.17 (a)  and (b) 

True statement for the above compounds is :

- (A) (a) is phenol while (b) is alcohol (B) Both (a) and (b) are primary alcohol
(C) (a) is primary and (b) is secondary alcohol (D) (a) is secondary and (b) is primary alcohol

Q.18 The IUPAC name of the following structure $(\text{CH}_3)\text{C}.\text{C}.\text{C}.\text{C}(\text{CH}_3)\text{CH}(\text{CH}_3)$ is:

- (A) 3-Methylhex-4-yn-2-ene (B) 3-Methylhex-2-en-4-yne
(C) 4-Methylhex-4-en-4-yne (D) All are correct

Q.19 The IUPAC name of the following structure is $[\text{CH}_3\text{CH}(\text{CH}_3)]_2 \text{C}(\text{CH}_2\text{CH}_3)\text{C}(\text{CH}_3) \text{C}(\text{CH}_2\text{CH}_3)_2$

- (A) 3,5-Diethyl-4,6-dimethyl-5-[1-methylethyl]hept-3-ene
(B) 3,5-Diethyl-5-isopropyl-4,6-dimethylhept-2-ene
(C) 3,5-Diethyl-5-propyl-4,6-dimethylhept-3-ene
(D) None of these

Q.20 The correct IUPAC name of $\text{CH}_3 - \text{CH}_2 - \underset{\text{CH}_2}{\overset{\text{||}}{\text{C}}} - \text{COOH}$ is:

- (A) 2-Methyl butanoic acid (B) 2-Ethylprop-2-enoic acid
(C) 2-Carboxybutene (D) None of the above

Q.21 The correct IUPAC name of 2-ethylpent-3-yne is:

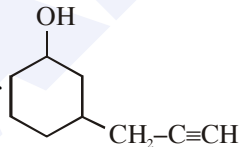
- (A) 3-Methyl hex-4-yne (B) 4-Ethyl pent-2-yne
(C) 4-methyl hex-2 yne (D) None of these

Q.22 All the following IUPAC names are correct except:

- (A) 1-Chloro-1-ethoxy propane (B) 1-Amino-1-ethoxypropane
(C) 1-Ethoxy-2-propanol (D) 1-Ethoxy-1-propanamine

Q.23 The IUPAC name of the compound $\text{CH}_3\text{CH} = \text{CHCH} = \text{CHC} \equiv \text{CCH}_3$ is:

- (A) Octa-4,6-diene-2-yne (B) Octa-2,4-diene-6-yne
(C) Oct-2-yne-4,6-diene (D) Oct-6-yne-2,4-diene

Q.24 The correct IUPAC name of 

- (A) 3-Cyclohexanol Propyne (B) 3-[3-Hydroxy Cyclohexyl] Propyne
(C) 3-Propynyl Cyclohexanol (D) 3-(2-propynyl) Cyclohexanol

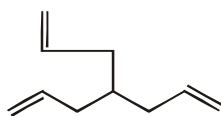
Q.25 The IUPAC name of β -ethoxy- α -hydroxy propionic acid (trivial name) is:

- (A) 1,2-Dihydroxy-1-oxo-3-ethoxy propane (B) 1-Carboxy-2-ethoxy ethanol
(C) 3-Ethoxy-2-hydroxy propanoic acid (D) All above

Q.26 As per IUPAC rules, which one of the following groups, will be regarded as the principal functional group ?

- (A) $-\text{C} \equiv \text{C}-$ (B) $-\text{OH}$ (C) $\begin{array}{c} -\text{C}- \\ || \\ \text{O} \end{array}$ (D) $\begin{array}{c} -\text{C}-\text{H} \\ || \\ \text{O} \end{array}$

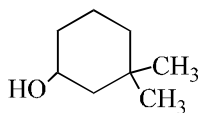
Q.27 The IUPAC name of the compound



is :

- (A) 4-Prop-1-enyl hepta-1,6-diene (B) 4-Propylidene hepta-1,6-diene
(C) 4-Propenyl hepta-1,6-diene (D) 4-[Prop-2-enyl] hepta-1,6-diene

Q.28 The IUPAC name of the given compound is:



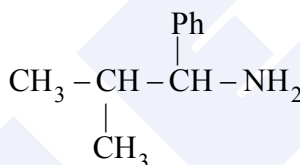
- (A) 1,1-Dimethyl-3-hydroxy cyclohexane (B) 3,3-Dimethyl-1-hydroxy cyclohexane
(C) 3,3-Dimethylcyclohexanol (D) 1,1-Dimethylcyclohexan-3-ol

Q.29 The IUPAC name of $(C_2H_5)_2NCH_2CH(Cl)COOH$ is:



- (A) 2-Chloro-4-N-ethylpentanoic acid (B) 2-Chloro-3-(N,N-diethyl amino)-propanoic acid
(C) 2-Chloro-2-oxo diethylamine (D) 2-Chloro-2-carboxy-N-ethyl ethane

Q.30 The IUPAC name of the compound is



- (A) 1-Amino-1-phenyl-2-methyl propane (B) 2-Methyl-1-phenyl propan-1-amine
(C) 2-Methyl-1-amino-1-phenyl propane (D) 1-Isopropyl-1-phenyl methyl amine

Q.31 Which of the following compound is wrongly named ?

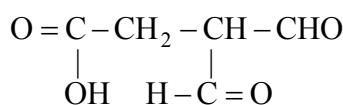
- (A) $CH_3CH_2CH_2CH(Cl)COOH$; 2-Chloro pentanoic acid

- (B) $CH_3C \equiv CCH(CH_3)COOH$; 2-Methyl hex-3-enoic acid

- (C) $CH_3CH_2CH=CHCOCH_3$; Hex-3-en-2-one

- (D) $CH_3-CH(CH_3)CH_2CH_2CHO$; 4-Methyl pentanal

Q.32 The correct IUPAC name of the following compound is:

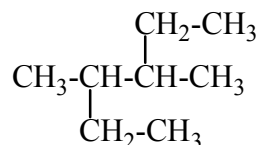


- (A) 3,3-Diformylpropanoic acid (B) 3-Formyl-4-oxo-butanoic acid
(C) 3,3-Dioxo propanoic acid (D) 3,3-Dicarbaldehyde propanoic acid

Q.33 The correct IUPAC name of compound $\text{CH}_3 - \text{CH}_2 - \underset{\text{O}}{\underset{\parallel}{\text{C}}} - \underset{\text{CN}}{\underset{|}{\text{CH}}} - \text{CHO}$ is :

- (A) 2-Cyano-3-oxopentanal (B) 2-Formyl-3-oxopentanenitrile
(C) 2-Cyanopentane-1,3-dione (D) 1,3-Dioxo-2-cyanopentane

Q.34 IUPAC name of compound



- (A) 2, 3-diethyl butane (B) 2-ethyl-3-methyl pentane
(C) 3-methyl-2-ethyl pentane (D) 3,4-dimethyl hexane

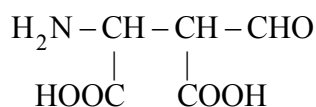
Q.35 The IUPAC name of compound $\text{CH}_3 - \overset{\text{O}}{\overset{\parallel}{\text{C}}} - \underset{\text{CH}_3}{\underset{|}{\text{CH}}} - \underset{\text{CHO}}{\underset{|}{\text{CH}}} - \underset{\text{CH}_3}{\underset{|}{\text{CH}}} - \text{CH}_3$ is:

- (A) 3,5-Dimethyl-4-Formyl pentanone (B) 1-Isopropyl-2-methyl-4-oxo butanal
(C) 2-Isopropyl-3-methyl-4-oxo pentanal (D) None of the above

Q.36 The IUPAC name of compound $\text{CH}_3 - \underset{\text{NH}_2}{\underset{|}{\text{C}}} = \underset{\text{Cl}}{\underset{|}{\text{C}}} - \underset{\text{CH}_3}{\underset{|}{\text{C}}} - \text{H}$ is :

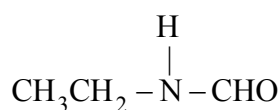
- (A) 2-Amino-3-chloro-2-methylpent-2-enoic acid (B) 3-Amino-4-chloro-2-methylpent-2-enoic acid
(C) 4-Amino-3-chloro-2-methylpent-2-enoic acid (D) All of the above

Q.37 The IUPAC name of the structure is:



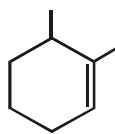
- (A) 3-Amino-2-formyl butane-1, 4-dioic acid (B) 3-Amino-2, 3-dicarboxy propanal
(C) 2-Amino-3-formyl butane-1, 4-dioic acid (D) 1-Amino-2-formyl succinic acid

Q.38 One among the following is the correct IUPAC name of the compound



- (A) N-Formyl aminoethane (B) N-Ethyl formyl amine
(C) N-Ethyl methanamide (D) Ethylamino methanal

Q.39 The IUPAC name of the structure is :



- (A) 1,2-Dimethyl-Cyclohexane (B) 1,6-Dimethyl-Cyclohexene
(C) 1,2-Dimethyl-Cyclohex-2-ene (D) 2,3-Dimethyl-Cyclohexane

Q.40 The IUPAC name of $\text{C}_6\text{H}_5\text{CH}=\text{CH}-\text{COOH}$ is :

- (A) Cinnamic acid (B) 1-Phenyl-2-carboxy ethane
(C) 3-Phenyl prop-2-enoic acid (D) Dihydroxy-3-phenyl propionic acid

Q.41 The IUPAC name of $\text{BrCH}_2-\underset{\text{CONH}_2}{\text{CH}}-\text{CO}-\text{CH}_2-\text{CH}_2\text{CH}_3$ is:

- (A) 2-Bromomethyl-3-oxohexanamide (B) 1-Bromo-2-amino-3-oxohexane
(C) 1-Bromo-2-amino-n-propyl ketone (D) 3-Bromo-2-propyl propanamide

Q.42 IUPAC name will be $\text{CH}_2-\underset{\text{CN}}{\text{CH}}-\underset{\text{CN}}{\text{CH}_2}$

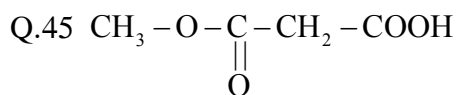
- (A) 1,2,3-Tricyano propane (B) Propane-1,2,3- trinitrile
(C) 1,2,3-Cyano propane (D) Propane-1,2,3-tricarbonitrile

Q.43 The IUPAC name of compound $\text{CH}_3\text{O}-\text{C}(=\text{O})-\text{C}_6\text{H}_4-\text{C}(=\text{O})-\text{O}-\text{C}(=\text{O})-\text{CH}_3$ is:

- (A) 3-Carbonyl methoxy -5- Ethanoyl oxy cyclohexanoic acid
(B) 3-Ethanoyl oxy -5- Methoxy carbonyl cyclohexane carboxylic acid
(C) 5-Ethanoyl oxy -5- Methoxy carbonyl cyclohexanoic acid
(D) 3-Methoxy carbonyl -5- Ethanoyl oxy cyclohexane carboxylic acid

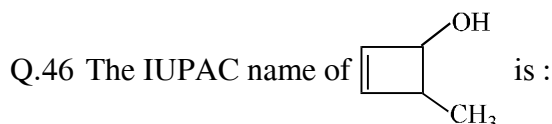
Q.44 The IUPAC name of $\text{CH}_3-\underset{\text{O}}{\underset{\parallel}{\text{C}}}-\text{O}-\text{CH}_2-\underset{\text{O}}{\underset{\parallel}{\text{C}}}-\text{OH}$ is:

- (A) 1-Acetoxy acetic acid (B) 2-Acetoxy ethanoic acid
(C) 2-Ethanoyloxyacetic acid (D) 2-Ethanoyloxyethanoic acid

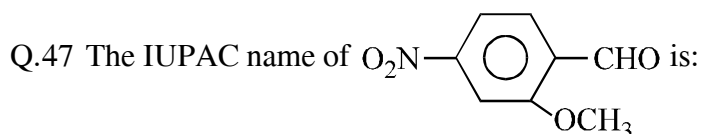


The correct IUPAC systematic name of the above compound is:

- (A) 2-Acetoxy ethanoic acid (B) 2-Methoxy carbonyl ethanoic acid
(C) 3-Methoxy formyl ethanoic acid (D) 2-Methoxy formyl acetic acid

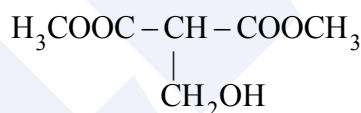


- (A) 3-Methyl cyclobut-1-ene-2-ol (B) 4-Methyl cyclobut-2-ene-1-ol
(C) 4-Methyl cyclobut-1-ene-3-ol (D) 2-Methyl cyclobut-3-ene-1-ol

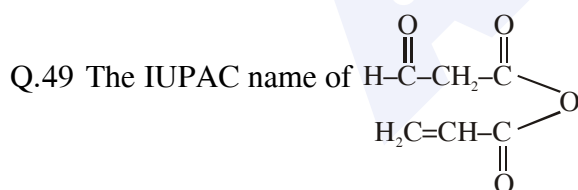


- (A) 2-Methoxy-4-nitro benzaldehyde (B) 4-Nitro anisaldehyde
(C) 3-Methoxy-4-formyl nitro benzene (D) 2-Formyl-4-nitro anisole

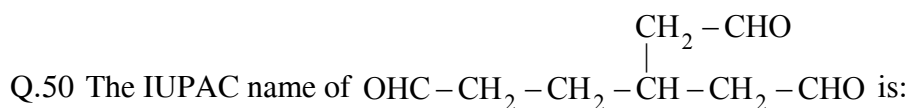
Q.48 The IUPAC name of compound



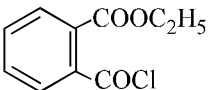
- (A) 2-(Hydroxy methyl) methyl propanedioate (B) Methyl-2-(hydroxy methyl) propanedioate
(C) 2-(Hydroxy methyl) dimethyl propanedioate (D) None of these



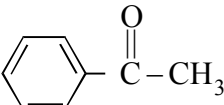
- (A) 2-Formyl ethanoic propanoic Anhydride (B) 2-Oxo-propanoic prop-2-enoic Anhydride
(C) Prop-2-enoic-2-formyl propanoic Anhydride (D) 2-Formyl ethanoic prop-2-enoic Anhydride



- (A) 4,4-Di(formylmethyl) butanal (B) 2-(Formylmethyl) butane-1, 4-dicarbaldehyde
(C) Hexane-3-acetal-1, 6-dial (D) 3-(Formylmethyl) hexane-1, 6-dial

Q.51 The IUPAC name of  is :

- (A) 2-Chlorocarbonyl ethylbenzoate (B) 2-Carboxyethyl benzoyl chloride
(C) Ethyl-2-(chlorocarbonyl)benzoate (D) Ethyl-1-(chlorocarbonyl)benzoate

Q.52 The IUPAC name of  is:

- (A) Phenyl ethanone (B) Methyl phenyl ketone
(C) Acetophenone (D) Phenyl methyl ketone

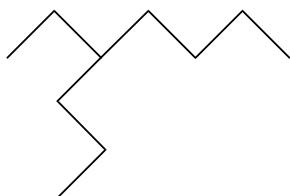
Q.53 Structural formula of isopropyl methanoate is :

- (A) $\text{CH}_3 - \underset{\text{O}}{\underset{\parallel}{\text{C}}} - \text{O} - \underset{\text{CH}_3}{\underset{|}{\text{CH}}} - \text{CH}_3$ (B) $\text{H} - \underset{\text{O}}{\underset{\parallel}{\text{C}}} - \text{O} - \text{CH}_2 - \underset{\text{CH}_3}{\underset{|}{\text{CH}}} - \text{CH}_3$
(C) $\text{CH}_3 - \underset{\text{O}}{\underset{\parallel}{\text{C}}} - \text{O} - \text{CH}_2 - \underset{\text{CH}_3}{\underset{|}{\text{CH}_2}}$ (D) $\text{H} - \underset{\text{O}}{\underset{\parallel}{\text{C}}} - \text{O} - \underset{\text{CH}_3}{\underset{|}{\text{CH}}} - \text{CH}_3$

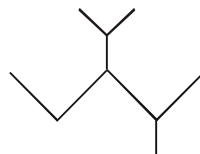
EXERCISE - S-II

Give the IUPAC names for each of the following :

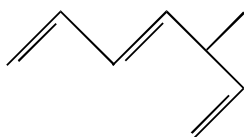
Q.1



Q.2



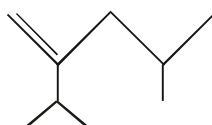
Q.3



Q.4



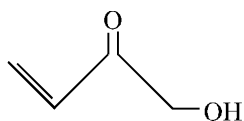
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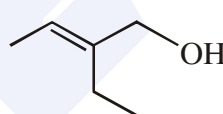
Q.6



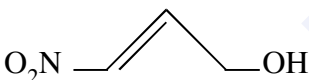
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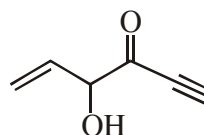
Q.8



Q.9



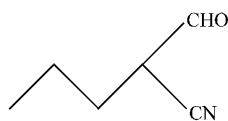
Q.10



Q.11



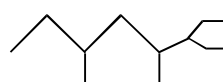
Q.12



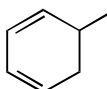
Q.13



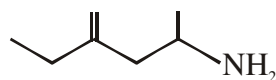
Q.14



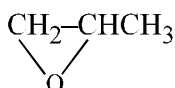
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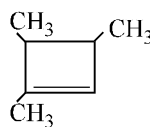
Q.16

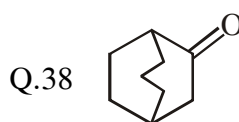
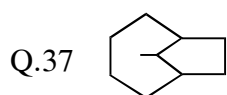
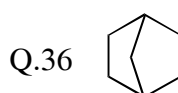
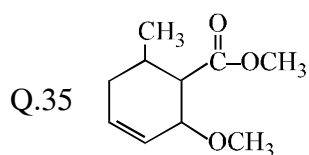
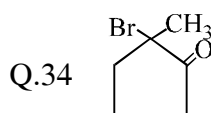
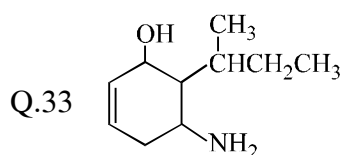
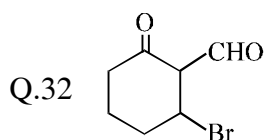
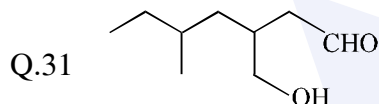
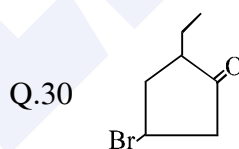
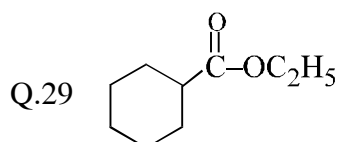
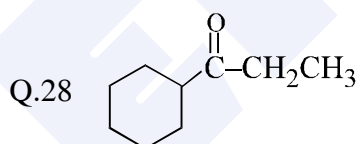
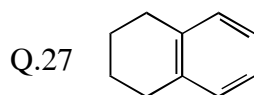
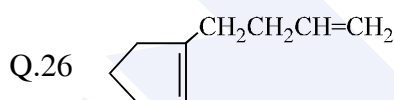
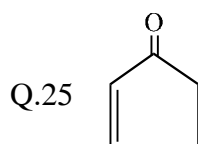
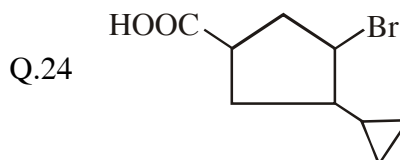
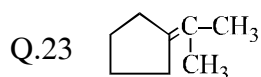
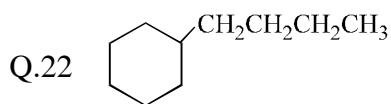
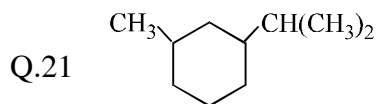
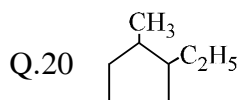
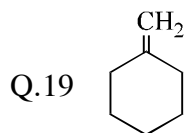


Q.17



Q.18

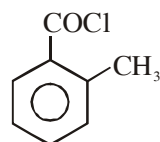




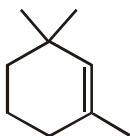
Q.39



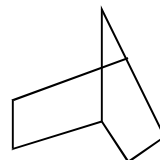
Q.40



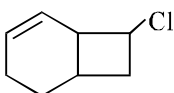
Q.41



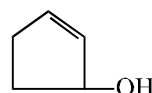
Q.42



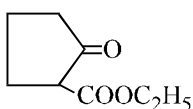
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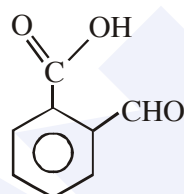
Q.44



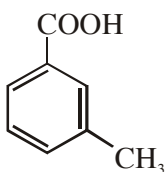
Q.45



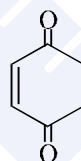
Q.46



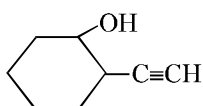
Q.47



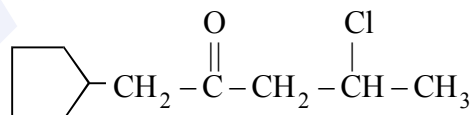
Q.48



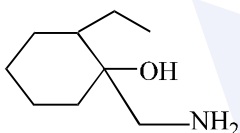
Q.49



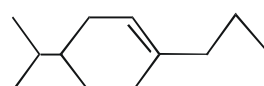
Q.50



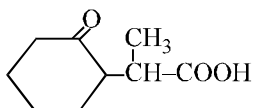
Q.51



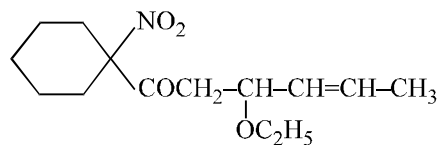
Q.52



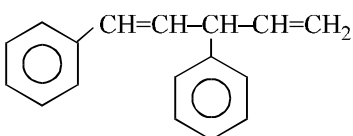
Q.53



Q.54



Q.55



EXERCISE - S-I

Q.1 Which of the following pairs have absence of carbocyclic ring in both compounds?

- (A) Pyridine, Benzene (B) Benzene, Cyclohexane
(C) Cyclohexane, Furane (D) Furane, Pyridine

Q.2 The commercial name of trichloroethene is:

- (A) Westron (B) Perclene (C) Westrosol (D) Orlone

Q.3 A substance containing an equal number of primary, secondary and tertiary carbon atoms is:

- (A) Mesityl Oxide (B) Mesitylene (C) Maleic acid (D) Malonic acid

Q.4 The IUPAC name of the compound Glycerine $\text{CH}_2 - \text{CH} - \text{CH}_2$ is:

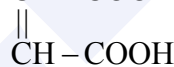


- (A) 1,2,3-Tri hydroxy propane (B) 3-Hydroxy pentane-1,5-diol
(C) 1,2,3-Hydroxy propane (D) Propane-1,2,3-triol

Q.5 Which of the following is crotonic acid:

- (A) $\text{CH}_2 = \text{CH} - \text{COOH}$ (B) $\text{C}_6\text{H}_5 - \text{CH} = \text{CH} - \text{COOH}$
(C) $\text{CH}_3 - \text{CH} = \text{CH} - \text{COOH}$ (D) $\text{CH} - \text{COOH}$

Q.6 The group of heterocyclic compounds is:



- (A) Phenol, Furane (B) Furane, Thiophene
(C) Thiophene, Phenol (D) Furane, Aniline

Q.7 **Column - I**

(Common Name)

(A) Isooctane

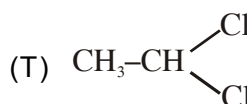
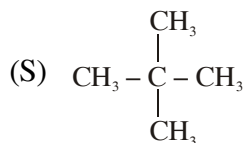
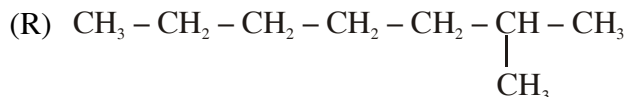
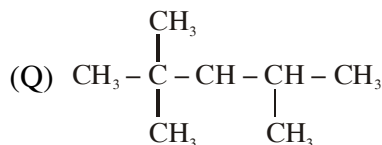
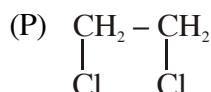
(B) Neopentane

(C) Ethylidene chloride
(Geminal dihalide)

(D) Ethylene Dichloride
(Vicinal dihalide)

Column - II

(Structural formula)



Q.8 Column - I
(Common Name)

- (A) Acetone
- (B) Acetaldehyde
- (C) Crotonaldehyde
- (D) Acrolein

Q.9 Column - I
(Common Name)

- (A) $\begin{array}{c} \text{CHO} \\ | \\ \text{CHO} \end{array}$
- (B) $\begin{array}{c} \text{CHO} \\ | \\ \text{H} - \text{C} - \text{OH} \\ | \\ \text{CH}_2 - \text{OH} \end{array}$
- (C) $\text{H}_2\text{N} - \text{CH}_2 - \text{COOH}$
- (D) $\begin{array}{c} \text{H} \\ | \\ \text{CH}_3 - \text{C} - \text{COOH} \\ | \\ \text{OH} \end{array}$

Q.10 Column - I
(Common Name)

- (A) Fumaric acid
- (B) Adipic acid
- (C) Maleic acid
- (D) Tartaric acid

Column - II
(Structural formula)

- (P) $\text{CH}_2 = \text{CH} - \overset{\text{O}}{\parallel} \text{C} - \text{H}$
- (Q) $\text{CH}_3 - \overset{\text{O}}{\parallel} \text{C} - \text{CH}_3$
- (R) $\text{CH}_3 - \text{CH} = \text{CH} - \overset{\text{O}}{\parallel} \text{C} - \text{H}$
- (S) $\text{CH}_3 - \overset{\text{O}}{\parallel} \text{C} - \text{H}$

Column - II
(Structural formula)

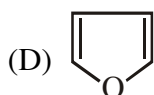
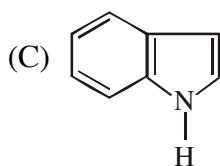
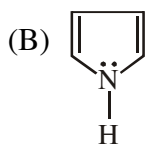
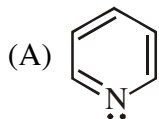
- (P) Lactic acid (In milk)
- (Q) Glyoxal
- (R) Glyceraldehyde
- (S) Glycine
- (T) Glycerol

Column - II
(Structural formula)

- (P) $\begin{array}{c} \text{HO} - \text{CH} - \text{COOH} \\ | \\ \text{HO} - \text{CH} - \text{COOH} \end{array}$
- (Q) $\begin{array}{c} \text{HC} - \text{COOH} \\ \parallel \\ \text{HOOC} - \text{CH} \end{array}$
- (R) $\begin{array}{c} \text{H} - \text{C} - \text{COOH} \\ \parallel \\ \text{H} - \text{C} - \text{COOH} \end{array}$
- (S) $\text{COOH}(\text{CH}_2)_4\text{COOH}$

Q.11 Column - I

(Common Name)



Column - II

(Structural formula)

(P) Pyrrole

(Q) Furan

(R) Thiophene

(S) Indol

(T) Pyridine

Q.12 Column - I

(Common Name)

(A) p-Cresol

(B) p-Xylene

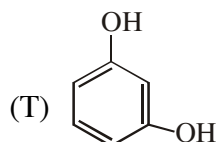
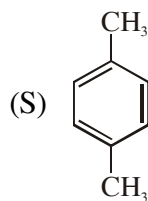
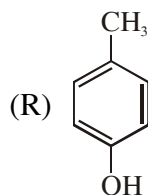
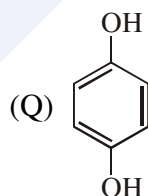
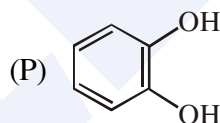
(C) Resorcinol

(D) Quinol

(E) Catechol

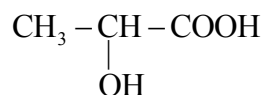
Column - II

(Structural formula)

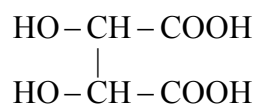


Q.13 Which of the following is not correctly matched:

(A) Lactic acid



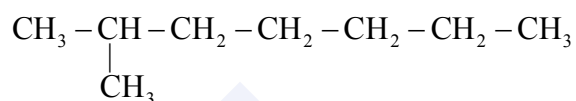
(B) Tartaric acid



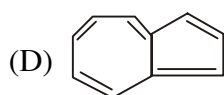
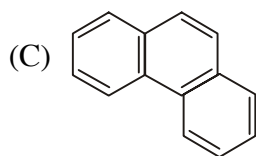
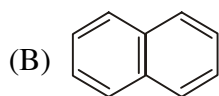
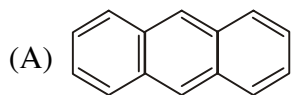
(C) Pivaldehyde



(D) Iso-octane



Q.14 Column - I



Column - II

(P) Phenanthrene

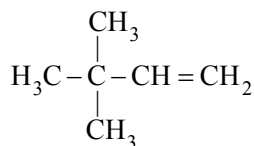
(Q) Anthracene

(R) Azulene

(S) Naphthalene

EXERCISE # (JEE-ADVANCE & MAINS)

- Q.1 The IUPAC name of the compound having the formula is : [JEE 1984]

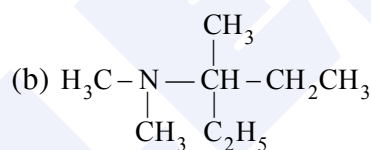
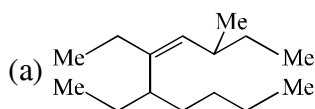


- (A) 3,3,3-trimethyl-1-propene (B) 1,1,1-trimethyl-2-propene
(C) 3,3-dimethyl-1-butene (D) 2,2-dimethyl-3-butene
- Q.2 Write the IUPAC name of $\text{CH}_3\text{CH}_2\text{CH}=\text{CH}\cdot\text{COOH}$ [JEE 1986]

- Q.3 The IUPAC name of the compound $\text{CH}_2=\text{CH}-\text{CH}(\text{CH}_3)_2$ is :
(A) 1,1-dimethyl-2-propene (B) 3-methyl-1-butene
(C) 2-vinyl propane (D) None of the above [JEE 1987]

- Q.4 The number of sigma and pi-bonds in 1-butene 3-yne are: [JEE 1989]
(A) 5 sigma and 5 pi (B) 7 sigma and 3 pi (C) 8 sigma and 2 pi (D) 6 sigma and 4 pi

- Q.5 Write I.U.P.A.C name of following :

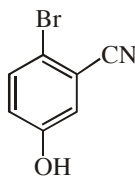


Me = methyl group

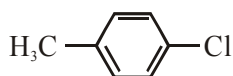
- Q.6 Write IUPAC name of succinic acid. [JEE 1994]

- Q.7 The IUPAC name of $\text{C}_6\text{H}_5\text{COCl}$ is
(A) Benzoyl chloride (B) Benzene chloro ketone
(C) Benzene carbonyl chloride (D) Chloro phenyl ketone [JEE 2006]

- Q.8 The IUPAC name of the following compound is [JEE 2009]



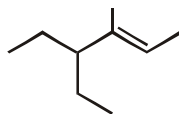
- (A) 4-Bromo-3-cyanophenol (B) 2-Bromo-5-hydroxybenzonitrile
(C) 2-Cyano-4-hydroxybromobenzene (D) 6-Bromo-3-hydroxybenzonitrile
- Q.9 The IUPAC name(s) of the following compound is(are) : [JEE 2017]



- (A) 4-methylchlorobenzene (B) 4-chlorotoluene
(C) 1-chloro-4-methylbenzene (D) 1-methyl-4-chlorobenzene

10. The IUPAC name of the following compound is :

[JEE Mains On_line 2018]



- (A) 4-methyl-3-ethylhex-4-ene
- (B) 4,4-diethyl-3-methylbut-2-ene
- (C) 3-ethyl-4-methylhex-4-ene
- (D) 4-ethyl-3-methylhex-2-ene

ANSWER KEY

EXERCISE - O-I

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

EXERCISE - O-II

Q.1	4-Ethyl octane	Q.17	1,2-epoxy propane
Q.2	3-Ethyl-2,4-dimethyl pentane	Q.18	1,3,4-trimethyl cyclobutene
Q.3	5-Methyl hepta-1,3,6-triene	Q.19	Methylene cyclohexane
Q.4	Hepta-1,5-dien-3-yne	Q.20	1-ethyl-2-methylcyclopentane
Q.5	2-Isopropyl-4-methyl pent-1-ene or 4-Methyl-2-(methyl ethyl) pent-1-ene	Q.21	1-methyl-3-(methyl ethyl) cyclohexane or 1-isopropyl-3-methylcyclohexane
Q.6	3-Methoxypropene	Q.22	Butyl cyclohexane
Q.7	1-Hydroxybut-3-en-2-one	Q.23	Isopropylidenecyclopentane or 1-methyl ethylidene cyclopentane
Q.8	2-Ethylbut-2-en-1-ol	Q.24	3-Bromo-4-cyclopropyl cyclopentane carboxylic acid
Q.9	3-nitroprop-2-en-1-ol	Q.25	Cyclopent-2-en-1-one
Q.10	4-hydroxyhex-5-en-1-yn-3-one	Q.26	1-(3-butenyl) cyclopentene
Q.11	4,6-Bis-[1,1-Dimethyl ethyl] Nonane	Q.27	1,2-diethenyl cyclohexene
Q.12	2-Formyl pentane nitrile	Q.28	1-cyclohexyl-1-propanone
Q.13	2,2,6,7-tetramethylcatane	Q.29	Ethyl cyclohexanecarboxylate
Q.14	3-Ethyl-4,6-dimethyloctane	Q.30	4-Bromo-2-ethyl cyclopentanone
Q.15	5-Methyl cyclohexa-1,3-diene	Q.31	3-(hydroxymethyl)-5-methylheptanal
Q.16	4-Ethyl Pent-4-en-2-amine		

- | | |
|---|---|
| Q.32 2-Bromo-6-oxocyclohexanecarbaldehyde | Q.43 8-chloro bicyclo(4,2,0) oct-2-ene |
| Q.33 5-amino-6-(1-methyl propyl)
cyclo hex-2-enol | Q.44 2-cyclopenten-1-ol |
| Q.34 2-bromo-2-methyl cyclopentanone | Q.45 Ethyl-2-oxo cyclo pentane carboxylate |
| Q.35 Methyl-2-methoxy-6-methyl-3- cyclohexene
carboxylate | Q.46 2-Formyl Benzoic acid |
| Q.36 Bicyclo(2,2,1)heptane | Q.47 3-Mthyl Benzoic acid |
| Q.37 9-methyl bicyclo(4,2,1) nonane | Q.48 Cyclohex-2-en-1,4-dione |
| Q.38 Bicyclo [3,2,2] Non-6-one | Q.49 2-ethynyl cyclohexanol |
| Q.39 spiro(4,5) decane | Q.50 4-chloro-1-cyclopentyl pentane-2-one |
| Q.40 2-Methyl Benzoyl Chloride | Q.51 1-Amino methyl-2-ethyl cyclohexanol |
| Q.41 1,3,3-Trimethyl cyclohexene | Q.52 4-isopropyl -1-propyl cyclohexene
or 4-(methyl ethyl)-1-propyl cyclohexene |
| Q.42 Bicyclo(2,2,1) heptane | Q.53 2-(2-oxo-cyclohexyl) propanoic acid |
| | Q.54 3-ethoxy-1(1-nitrocyclohexyl)-hex-4-en-1-one |
| | Q.55 1,3-diphenyl-1,4-pentadiene |

EXERCISE - S-I

Q.1 D Q.2 C Q.3 B Q.4 D Q.5 C Q.6 B

Q.7 (A) Q, (B) S, (C) T, (D) P Q.8 (A) Q, (B) S, (C) R, (D) P

Q.9 (A) Q, (B) R, (C) S, (D) P Q.10 (A) Q, (B) S, (C) R, (D) P

Q.11 (A) T, (B) P, (C) S, (D) Q Q.12 (A) R, (B) S, (C) T, (D) Q, (E) P

Q.13 D Q.14 (A) Q, (B) S, (C) P, (D) R

EXERCISE - (JEE-ADVANCE & MAINS)

Q.1 C

Q.2 $\text{CH}_3 - \text{CH}_2 - \text{CH} = \text{CH} - \text{COOH}$
 $\begin{matrix} 5 & 4 & 3 & 2 & 1 \end{matrix}$

2-pentene-1-oic acid and or 2-pentenoic acid

Q.3 B Q.4 B

Q.5 (a) 5,6-diethyl-3-methyl-dec-4-ene (b) N,N, 3-trimethyl-3-pentanamine

Q.6 Butane-1,4-dioic acid Q.7 C Q.8 B Q.9 B,C

10. D