Set – 1

Table 12.1 Common or Trivial Names of Some Organic Compounds

Compound	Common name
CH_4	Methane
$H_3CCH_2CH_2CH_3$	*n*-Butane
$(H_3C)_2CHCH_3$	Isobutane
$(H_3C)_4C$	Neopentane
$H_3CCH_2CH_2OH$	*n*-Propyl alcohol
HCHO	Formaldehyde
$(H_3C)_2CO$	Acetone
$CHCl_3$	Chloroform
CH_3COOH	Acetic acid
C_6H_6	Benzene
$C_6H_5OCH_3$	Anisole
$C_6H_5NH_2$	Aniline
$C_6H_5COCH_3$	Acetophenone
$CH_3OCH_2CH_3$	Ethyl methyl ether

Q1. Which of the following represents '2,2-dimethylpropane'?

A. Isobutane
B. Neobutane
C. Neopentane
D. isopentane

Ans. (D)

Q2. Which of the following is known as 'acetone'?

A. $HCHO$
B. $CHCl_3$
C. $(H_3C)_2CO$
D. $C_6H_5OCH_3$

Ans. (C)

Q3. Which of the following is the common name for CHCl3?

A. Chloroform
B. Chloramphenicol
C. Chloral
D. Mustard Gas

Ans. (A)

Q4. Which of the following is the common name for C6H5OCH3?

A. Anisole
B. Aniline
C. Phenol
D. Acetophenone

Ans. (A)

Q5. Which of the following is the common name for C6H5NH2?

A. Aniline
B. Anisole
C. Phenol
D. Acetophenone

Ans. (A)

Q6. Which of the following compounds is known as Acetophenone?

A. 1-phenylbutanone
B. 1-phenylethanone
C. 1-phenylbutan-2-one
D. 1-phenylpropanone

Ans. (B)

Set – 2

Table 12.2 IUPAC Names of Some Unbranched Saturated Hydrocarbons

Name	Molecular formula	Name	Molecular formula
Methane	CH_4	Heptane	C_7H_{16}
Ethane	C_2H_6	Octane	C_8H_{18}
Propane	C_3H_8	Nonane	C_9H_{20}
Butane	C_4H_{10}	Decane	$C_{10}H_{22}$
Pentane	C_5H_{12}	Icosane	$C_{20}H_{42}$
Hexane	C_6H_{14}	Triacontane	$C_{30}H_{62}$

Q1. What is the IUPAC name given to C20H42?

A. Icosane
B. Dodecane
C. Twenane
D. None of the above

Ans. (A)

Q2. What is the IUPAC name given to C30H62?

A. Triacontane
B. Tricosane
C. Thirtane
D. None of the above

Ans. (B)

Q3. What is the general formula that alkanes follow?

A. $C_nH_{2n+!}$
B. C_nH_{2n+2}
C. C_nH_{2n}
D. C_nH_{2n+4}

Ans. (C)

Set – 3

Class of compounds	Functional group structure	IUPAC group prefix	IUPAC group suffix	Example
Alkanes	-	-	-ane	Butane, $CH_3(CH_2)_2CH_3$
Alkenes	>C=C<	-	-ene	But-1-ene, $CH_2=CHCH_2CH_3$
Alkynes	-C≡C-	-	-yne	But-1-yne, $CH\equiv CCH_2CH_3$
Arenes	-	-	-	Benzene, 
Halides	-X (X=F,Cl,Br,I)	halo-	-	1-Bromobutane, $CH_3(CH_2)_2CH_2Br$
Alcohols	-OH	hydroxy-	-ol	Butan-2-ol, $CH_3CH_2CHOHCH_3$
Aldehydes	-CHO	formyl, or oxo	-al	Butanal, $CH_3(CH_2)_2CHO$
Ketones	>C=O	oxo-	-one	Butan-2-one, $CH_3CH_2COCH_3$
Nitriles	-C≡N	cyano	nitrile	Pentanenitrile, $CH_3CH_2CH_2CH_2CN$
Ethers	-R-O-R-	alkoxy-	-	Ethoxyethane, $CH_3CH_2OCH_2CH_3$
Carboxylic acids	-COOH	carboxy	-oic acid	Butanoic acid, $CH_3(CH_2)_2CO_2H$
Carboxylate ions	$-COO^-$	-	-oate	Sodium butanoate, $CH_3(CH_2)_2CO_2^-\ Na^+$
Esters	-COOR	alkoxycarbonyl	-oate	Methyl propanoate, $CH_3CH_2COOCH_3$
Acyl halides	-COX (X=F,Cl,Br,I)	halocarbonyl	-oyl halide	Butanoyl chloride, $CH_3(CH_2)_2COCl$
Amines	$-NH_2$, >NH,>N-	amino-	-amine	Butan -2-amine , $CH_3CHNH_2CH_2CH_3$
Amides	$-CONH_2$, -CONHR, $-CONR_2$	-carbamoyl	-amide	Butanamide, $CH_3(CH_2)_2CONH_2$
Nitro compounds	$-NO_2$	nitro	-	1-Nitrobutane, $CH_3(CH_2)_3NO_2$
Sulphonic acids	$-SO_3H$	sulpho	sulphonic acid	Methylsulphonic acid CH_3SO_3H

Q1. Which of the following can be used as a prefix for the aldehyde group?

A. Formyl
B. Oxo
C. Alkoxy
D. Both A and B

Ans. (D)

Q2. Which of the following can be used as a suffix for the -CN group?

A. Cyano
B. Nitrile
C. Carbonitrogen
D. None of these

Ans. (B)

Q3. Which of the following can be used as a prefix for the -COOH group?

A. Carboxy
B. Carbamoyl
C. Carboxylic acid
D. Oic acid

Ans. (A)

Q4. Which of the following is the correct IUPAC name for the given compound?

A. Butanoic acid
B. Sodium butanoate
C. Sodium pentanoate
D. None of these

Ans. (B)

Q5. Which of the following is the correct IUPAC name for the given compound?

A. Methyl propanoate
B. Propyl methanoate
C. Butanoate
D. None of the above

Ans. (A)

Q6. Which of the following can be used as a prefix for the -CONH2group?

A. Carbamoyl
B. Amide
C. Carboamine
D. None of these

Ans. (B)

Q7. Which of the following is the correct IUPAC name for the given compound?

A. Methylsoic acid
B. Methylsulphonic acid
C. Methylthioic acid
D. methylthiol

Ans. (C)

Q8. The correct decreasing order of priority for the functional groups of organic compound in the IUPAC system nomenclature is:

A. -CHO, -COOH, $-SO_3H$, $-CONH_2$
B. $-CONH_2$, -CHO, $-SO_3H$, -COOH
C. -COOH, $-SO_3H$, $-CONH_2$, -CHO
D. $-SO_3H$, -COOH, $-CONH_2$, -CHO

Ans. (C)