Set – 1

names of a few alcohols as examples.

Table 11.1: Common and IUPAC Names of Some Alcohols

Compound	Common name	IUPAC name
$CH_3 - OH$	Methyl alcohol	Methanol
$CH_3 - CH_2 - CH_2 - OH$	*n*-Propyl alcohol	Propan-1-ol
$CH_3 - \underset{\displaystyle OH}{\underset{\vert}{CH}} - CH_3$	Isopropyl alcohol	Propan-2-ol
$CH_3 - CH_2 - CH_2 - CH_2 - OH$	*n*-Butyl alcohol	Butan-1-ol
$CH_3 - \underset{\displaystyle OH}{\underset{\vert}{CH}} - CH_2 - CH_3$	*sec*-Butyl alcohol	Butan-2-ol
$CH_3 - \underset{\displaystyle CH_3}{\underset{\vert}{CH}} - CH_2 - OH$	Isobutyl alcohol	2-Methylpropan-1-ol
$CH_3 - \underset{\displaystyle CH_3}{\underset{\vert}{\overset{\displaystyle CH_3}{\overset{\vert}{C}}}} - OH$	*tert*-Butyl alcohol	2-Methylpropan-2-ol
$HO - H_2C - CH_2 - OH$	Ethylene glycol	Ethane-1,2-diol
$\underset{\displaystyle OH}{\underset{\vert}{CH_2}} - \underset{\displaystyle OH}{\underset{\vert}{CH}} - \underset{\displaystyle OH}{\underset{\vert}{CH_2}}$	Glycerol	Propane -1, 2, 3-triol

Q1. What is the IUPAC name of n-butyl alcohol?

A. Butan-4-ol
B. Butan-1-ol
C. Butan-2-ol
D. Butan-3-ol

Ans. (B)

Q2. What is the IUPAC name of Glycerol?

A. Propane-1,2,3-triol
B. Propane-1,2-diol
C. Propane-1-ol
D. none of above

Ans. (A)

Q3. What is the IUPAC name of Ethylene glycol?

A. Ethanol
B. Ethene-1,2-diol
C. Ethane-1,2-diol
D. none of above

Ans. (C)

Q4. What is the common name of Propane-1,2,3-triol ?

A. Glycerol
B. Ethylene glycol
C. n-propyl alcohol
D. none of the above

Ans. (A)

Q5. What is the common name of Ethane-1,2-diol ?

A. Glycerol
B. Ethylene glycol
C. n-ethyl alcohol
D. none of the above

Ans. (B)

Q6. What is the common name for C(CH3)3OH ?

A. n-Butyl alcohol
B. sec-Butyl alcohol
C. iso-Butyl alcohol
D. tert-Butyl alcohol

Ans. (D)

Q7. What is the common name for CH2(OH)CH(OH) CH2(OH) ?

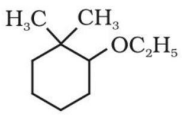
A. Glycerol
B. Ethylene glycol

C. n-propyl alcohol
D. none of the above

Ans. (A)

Set - 2

Table 11.2: Common and IUPAC Names of Some Ethers

Compound	Common name	IUPAC name
CH_3OCH_3	Dimethyl ether	Methoxymethane
$C_2H_5OC_2H_5$	Diethyl ether	Ethoxyethane
$CH_3OCH_2CH_2CH_3$	Methyl n-propyl ether	1-Methoxypropane
$C_6H_5OCH_3$	Methyl phenyl ether (Anisole)	Methoxybenzene (Anisole)
$C_6H_5OCH_2CH_3$	Ethyl phenyl ether (Phenetole)	Ethoxybenzene
$C_6H_5O(CH_2)_6-CH_3$	Heptyl phenyl ether	1-Phenoxyheptane
$CH_3O-\underset{\displaystyle CH_3}{\overset{\displaystyle |}{CH}}-CH_3$	Methyl isopropyl ether	2-Methoxypropane
$C_6H_5-O-CH_2-CH_2-\underset{\displaystyle CH_3}{\overset{\displaystyle |}{CH}}-CH_3$	Phenyl isopentyl ether	3- Methylbutoxybenzene
$CH_3-O-CH_2-CH_2-OCH_3$	—	1,2-Dimethoxyethane
	—	2-Ethoxy- -1,1-dimethylcyclohexane

Q1. What is the IUPAC name of Phenyl iso pentyl ether?

A. 1- Methylbutoxybenzene
B. 2- Methylbutoxybenzene
C. 3- Methylbutoxybenzene
D. 1- ethylbutoxybenzene

Ans. (C)

Q2. What is the IUPAC name of diethyl ether?

A. Ethoxyethene
B. Ethoxyethane
C. Ethoxyethyne
D. none of above

Ans. (B)

Q3. What is the IUPAC name of heptyl pentyl ether?

A. 1-phenoxyheptane
B. 2-phenoxyheptane
C. 3-phenoxyheptane
D. none of above

Ans. (A)

Q4. What is the common name of 3- Methylbutoxybenzene ?

A. Phenyl iso pentyl ether
B. Phenyl neo pentyl ether
C. Phenyl tert pentyl ether
D. none of the above

Ans. (A)

Q5. What is the common name of Anisole ?

A. methyl Pentyl ether
B. Ethyl Pentyl ether
C. propyl Pentyl ether
D. none of the above

Ans. (A)

Q6. What is the common name for C6H5OCH2CH3?

A. methyl Pentyl ether
B. Ethyl Pentyl ether
C. propyl Pentyl ether
D. none of the above

Ans. (B)

Q7. What is the common name for Phenetole?

A. methyl Pentyl ether
B. Ethyl Pentyl ether
C. propyl Pentyl ether

D. none of the above

Ans. (B)

Set – 3

Table 11.3: pK_a Values of some Phenols and Ethanol

Compound	Formula	pK_a
o-Nitrophenol	*o*–O_2N–C_6H_4–OH	7.2
m-Nitrophenol	*m*–O_2N–C_6H_4–OH	8.3
p-Nitrophenol	*p*-O_2N–C_6H_4–OH	7.1
Phenol	C_6H_5–OH	10.0
o-Cresol	*o*-CH_3–C_6H_4–OH	10.2
m-Cresol	*m*-$CH_3C_6H_4$–OH	10.1
p-Cresol	*p*-CH_3–C_6H_4–OH	10.2
Ethanol	C_2H_5OH	15.9

Q1. Compare the following on the basis of acidity

A. p-Nitrophenol>m-Nitrophenol>o-Nitrophenol
B. p-Nitrophenol
C. p-Nitrophenol>o-Nitrophenol>m-Nitrophenol
D. p-Nitrophenol

Ans. (C)

Q2. Which of the following has highest acidity

A. p-Nitrophenol
B. m-Nitrophenol
C. o-Nitrophenol
D. Phenol

Ans. (A)

Q3. Which of the following has highest pKa.

A. p-Nitrophenol
B. m-Nitrophenol
C. o-Nitrophenol
D. Phenol

Ans. (D)

Q4. Compare the following on the basis of acidity

A. p-cresol=o-cresol>m-cresol
B. p-cresol
C. p-cresol>o-cresol>m-cresol
D. p-cresol=o-cresol

Ans. (D)

Q5. Which of the following has highest acidity

A. p-cresol
B. m-cresol
C. o-cresol
D. ethanol

Ans. (B)

Q6. Which of the following has highest pKa.

A. p-cresol
B. m-cresol
C. o-cresol
D. ethanol

Ans. (D)