Organic Nomenclature Review

ALKANES

Write the names for the following.

1.

$$H_3C$$
 — CH_3 CH_3 CH_3 CH_3 CH_4 CH_5 CH_5 CH_6 CH_7 CH_8 CH_8

3.

Draw the structures for the following.

4. 2,2,3-trimethylbutane

5. cyclohexane

ALKENES

Write the names for the following.

$$^{\text{CH}_3}$$
 $^{\text{C}}$ $^{\text{CH}_3}$



1.

 H_3C CH_3 CH_3

Draw the structures for the following.

4. trans-hex-3-ene

5. 2-methyl-pent-1-ene

ALKYNES

Write the names for the following.

1.

$$CH_3 - CH_2 - CH_2 - C = C - CH_2 - CH_2 - CH_2 - CH_2 - CH_3$$

2.

Draw the structures for the following.

3.pent-3-ene-1-yne

4. 3,3-dimethyl-1-butyne

5.penta-1,3-diyne

ALKANOLS

Write the names for the following and state if they are primary, secondary, or tertiary.

2.

OH

Draw structures for the following and state if they are primary, secondary, or tertiary.

4. 3-ethyl-1-pentanol

5.propan-2-ol

AMINES

Write the names for the following and state if they are primary, secondary, or tertiary.

$$CH_{3}CHCH_{3}$$

 NH_{2} $H_{2}N-CH_{2}-CH_{2}-NH_{2}$
3. 4.

Draw the structure for the following and state if it is primary, secondary, or tertiary.

5.dimethylamine

NITRILES

Draw the structures for the following.

1. pentnitrile

2. 3,7-dimethylnonanenitrile

3.ethanenitrile

Write the names for the following.

ALKANONES

Write the names for the following.

Draw the structures for the following.

4. cyclobutanone

5.cyclohepta-1,3-dione

ALKANALS

Write the names for the following.

H H H C H H C C C C C H

- 1.
- Draw the structures for the following.
- **3.** ethanol
- **4.** 2-methylpropanal

5.3-bromo-3-methylbutanal

ALKANOIC ACIDS

Write the names for the following.

1. 2.

$$\bigvee_{O} \mathsf{OH}$$

3.

Draw the structures for the following.

4. methanoic acid

5.butanedioic acid

ETHERS

Draw the structures for the following.

- 1. ethoxyethane
- **2.** 1-butoxybutane

Write the names for the following.

3. 4.

ESTERS

Draw the structures for the following.

- 1. ethyl benzoate
- 2. butylethanoate

3. ethylbutanoate

Write the names for the following.

AMIDES

Write the names for the following.

$$O_{NH_2}$$
 O_{NH_2}

1. 2.

$$\nearrow_{\mathsf{N}}^{\mathsf{O}}$$

3.

Draw structures for the following.

4. ethanamide

5.methanamide

Answers

ALKANES

1. 6-ethyl-2-3-dimethyldecane 2. 3. 2,3,4,5,6-pentamethyloctane

$$H_3C$$
 CH_3
 CH_3

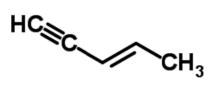
ALKENES

1. cis-but-2-ene 2. cis-2-methyl-hex-3-ene3. 2,3,5,7-tetramethyloct-2-ene

$$CH_3$$
 H_2C
 CH_3
 CH_3
 H

ALKYNES

1. 4-decyne **2.**2,4-pentyne



$$H_3C-C=CH$$
 H_3C

ALKANOLS

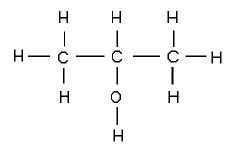
4.

1. 4-methyl-4-heptanol; secondary 2.3-ethyl-4-methyl-2-hexanol; primary

$$\begin{array}{c} \operatorname{CH_2CH_3} \\ \mathsf{I} \\ \operatorname{CH_3} \operatorname{-CH_2} \operatorname{-CH_2-CH_2OH} \end{array}$$

3.cyclopentanol; secondary**4.**

; primary



; secondary

AMINES

5.

1.benzylamine; primary 2.4-aminoheptane; primary 3.propan-2-amine; primary 4. ethane-

1,2-diamine; primary5.

; secondary

NITRILES

1.

3.

4. tridecanenitrile**5.**cyclohexanecarbonitrile

ALKANONES

1.cyclopentanone 2.butane-2,3-dione 3. 5,5-dimethylcyclohexane-1,3-dione4.

2.

5.

ALKANALS

1.nonanal 2. 2,2-dimethylbutanal

3.

4.

ALKANOIC ACIDS

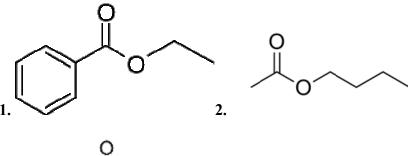
1. butanoic acid 2. 3-methylbutanoic acid3.4,6-dimethylheptanoic acid

ETHERS

3.

methoxybenzene4.methoxymethane 5.2-bromo-5-methoxyhexane

ESTERS



4. octylethanoate**5.**ethyl benzoate

AMIDES

1. N,N-dimethylmethanamide2.N,N-dibutylmethanamide3.N-ethylpropanamide 4.

