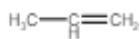


Naming Compounds from Chemical Formulas

Alkanes, Alkenes, Alkynes

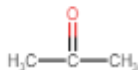
1. What is the name of the compound with the formula C_3H_8 ?

a) Propene



b) Propane (Correct) $H_3C-\underset{H_2}{\underset{|}{C}}-CH_3$

c) Propanone



d) Propyne



2. What is the name of the compound with the formula C_2H_4 ?

a) Ethane



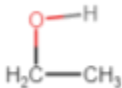
b) Ethene (Correct)



c) Ethyne



d) Ethanol



3. What is the name of the compound with the formula C_2H_2 ?

a) Ethane



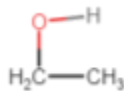
b) Ethene



c) Ethyne (Correct)

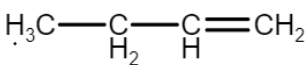


d) Ethanol

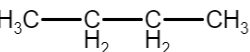


4. What is the name of the compound with the formula C_4H_{10} ?

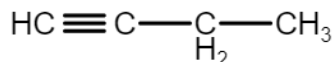
a) Butene



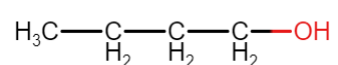
b) Butane (Correct)



c) Butyne



d) Butanol



5. What is the name of the compound with the formula C_3H_6 ?

- a) Propane $\cdot H_3C - \underset{H_2}{C} - CH_3$
- b) Propene (Correct) $H_3C - \underset{H}{C} = CH_2$
- c) Propanol $H_3C - \underset{H_2}{C} - \underset{H_2}{C} - OH$
- d) Propyne $HC \equiv C - CH_3$

6. What is the name of the compound with the formula C_5H_{12} ?

- a) Pentane (Correct) $H_3C - \underset{H_2}{C} - \underset{H_2}{C} - \underset{H_2}{C} - CH_3$
- b) Pentene $H_3C - \underset{H_2}{C} - \underset{H_2}{C} - \underset{H}{C} = CH_2$
- c) Pentyne $HC \equiv C - \underset{H_2}{C} - \underset{H_2}{C} - CH_3$
- d) Pentanol $H_3C - \underset{H_2}{C} - \underset{H_2}{C} - \underset{H_2}{C} - \underset{H_2}{C} - OH$

7. What is the name of the compound with the formula C_4H_8 ?

- a) Butane $H_3C - \underset{H_2}{C} - \underset{H_2}{C} - CH_3$
- b) Butene (Correct) $H_3C - \underset{H_2}{C} - \underset{H}{C} = CH_2$
- c) Butanol $H_3C - \underset{H_2}{C} - \underset{H_2}{C} - \underset{H_2}{C} - OH$
- d) Butanal $H_3C - \underset{H_2}{C} - \underset{H_2}{C} - \overset{O}{\parallel} CH$

8. What is the name of the compound with the formula C_2H_6 ?

- a) Ethene $H_2C = CH_2$
- b) Ethyne $HC \equiv CH$
- c) Ethane (Correct) $H_3C - CH_3$
- d) Ethanol $\begin{array}{c} O-H \\ | \\ H_2C - CH_3 \end{array}$

9. What is the name of the compound with the formula C_3H_4 ?

- a) Propane $\cdot H_3C - \underset{H_2}{C} - CH_3$
- b) Propene $H_3C - \underset{H}{C} = CH_2$

c) Propyne (Correct) $\text{HC} \equiv \text{C} - \text{CH}_3$

d) Propanol $\text{H}_3\text{C} - \underset{\text{H}_2}{\text{C}} - \underset{\text{H}_2}{\text{C}} - \text{OH}$

10. What is the name of the compound with the formula C_5H_{10} ?

a) Pentane $\text{H}_3\text{C} - \underset{\text{H}_2}{\text{C}} - \underset{\text{H}_2}{\text{C}} - \underset{\text{H}_2}{\text{C}} - \text{CH}_3$


b) Pentene (Correct) $\text{H}_3\text{C} - \underset{\text{H}_2}{\text{C}} - \underset{\text{H}_2}{\text{C}} - \underset{\text{H}}{\text{C}} = \text{CH}_2$

c) Pentyne $\text{HC} \equiv \text{C} - \underset{\text{H}_2}{\text{C}} - \underset{\text{H}_2}{\text{C}} - \text{CH}_3$


d) Pentanol $\text{H}_3\text{C} - \underset{\text{H}_2}{\text{C}} - \underset{\text{H}_2}{\text{C}} - \underset{\text{H}_2}{\text{C}} - \underset{\text{H}_2}{\text{C}} - \text{OH}$

Aromatic Hydrocarbons

11. What is the name of the compound with the formula C_6H_6 ?


a) Cyclohexane 

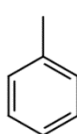
b) Benzene (Correct) 

c) Hexane 


d) Toluene 

12. What is the name of the compound with the formula C_7H_8 ?

a) Benzene 

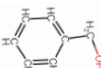
b) Toluene (Correct) 

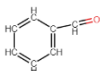
c) Heptane 


d) Cycloheptane 

13. What is the name of the compound with the formula $\text{C}_6\text{H}_5\text{OH}$?

a) Phenol (Correct) 

b) Benzyl alcohol 

c) Benzaldehyde 

d) Benzene 

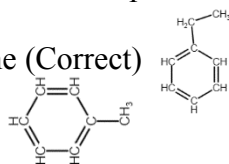
14. What is the name of the compound with the formula C_8H_{10} ?

a) Ethylbenzene (Correct)

b) Toluene

c) Xylene

d) Cyclooctane



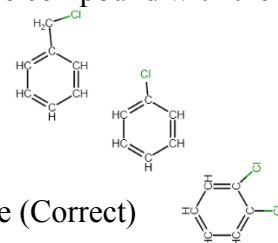
15. What is the name of the compound with the formula $C_6H_4Cl_2$?

a) Benzyl chloride

b) Chlorobenzene

c) Dichlorobenzene (Correct)

d) Benzene dichloride



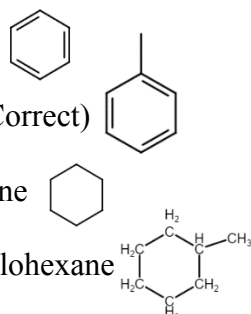
16. What is the name of the compound with the formula $C_6H_5CH_3$?

a) Benzene

b) Toluene (Correct)

c) Cyclohexane

d) Methylcyclohexane



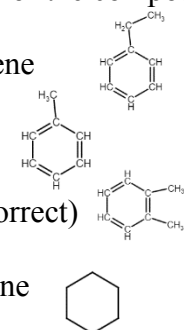
17. What is the name of the compound with the formula $C_6H_4(CH_3)_2$?

a) Ethylbenzene

b) Toluene

c) Xylene (Correct)

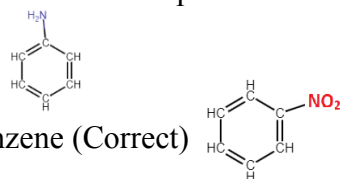
d) Cyclohexane

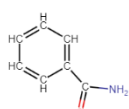
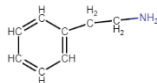


18. What is the name of the compound with the formula $C_6H_5NO_2$?


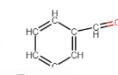
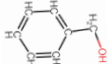
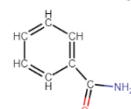
a) Aniline

b) Nitrobenzene (Correct)


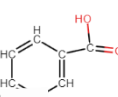
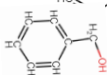
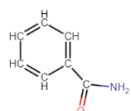


- c) Benzamide 
- d) Benzylamine 

19. What is the name of the compound with the formula C_6H_5CHO ?

- a) Phenol 
- b) Benzaldehyde (Correct) 
- c) Benzyl alcohol 
- d) Benzamide 

20. What is the name of the compound with the formula C_6H_5COOH ?

- a) Phenol 
- b) Benzoic acid (Correct) 
- c) Benzyl alcohol 
- d) Benzamide 

Alcohols

21. What is the name of the compound with the formula C_2H_5OH ?

- a) Methanol H_3C-OH
- b) Ethanol (Correct) H_3C-CH_2-OH
- c) Propanol $H_3C-CH_2-CH_2-OH$
- d) Butanol $H_3C-CH_2-CH_2-CH_2-OH$

22. What is the name of the compound with the formula C_3H_7OH ?

- a) Methanol H_3C-OH
- b) Ethanol H_3C-CH_2-OH
- c) Propanol (Correct) $H_3C-CH_2-CH_2-OH$
- d) Butanol $H_3C-CH_2-CH_2-CH_2-OH$

23. What is the name of the compound with the formula C_4H_9OH ?

- a) Methanol H_3C-OH
- b) Ethanol H_3C-CH_2-OH
- c) Propanol $H_3C-CH_2-CH_2-OH$
- d) Butanol (Correct) $H_3C-CH_2-CH_2-CH_2-OH$

Aldehydes

24. What is the name of the compound with the formula CH_3CHO ?

- a) Methanal $H-C(=O)-H$
- b) Ethanal (Correct) $H_3C-C(=O)-H$
- c) Propanal $H_3C-CH_2-C(=O)-H$
- d) Butanal $H_3C-CH_2-CH_2-C(=O)-H$

25. What is the name of the compound with the formula C_3H_7CHO ?

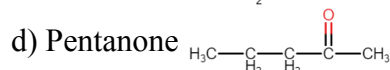
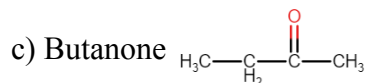
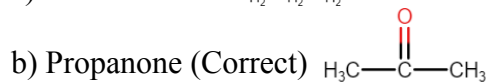
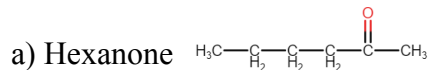
- a) Methanal $H-C(=O)-H$
- b) Ethanal $H_3C-C(=O)-H$
- c) Propanal (Correct) $H_3C-CH_2-C(=O)-H$
- d) Butanal $H_3C-CH_2-CH_2-C(=O)-H$

26. What is the name of the compound with the formula C_4H_9CHO ?

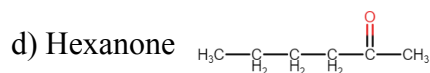
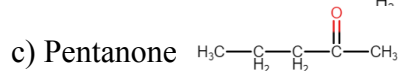
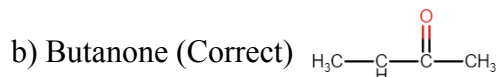
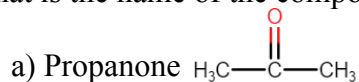
- a) Methanal $H-C(=O)-H$
- b) Ethanal $H_3C-C(=O)-H$
- c) Propanal $H_3C-CH_2-C(=O)-H$
- d) Butanal (Correct) $H_3C-CH_2-CH_2-C(=O)-H$

Ketones

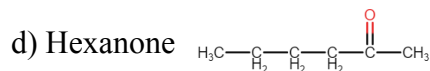
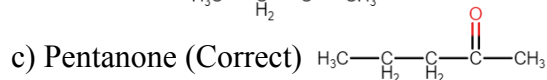
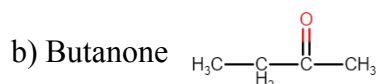
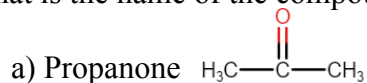
27. What is the name of the compound with the formula CH_3COCH_3 ?



28. What is the name of the compound with the formula $\text{C}_4\text{H}_8\text{O}$?

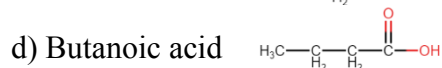
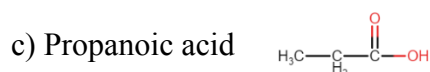
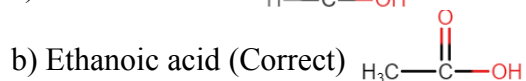
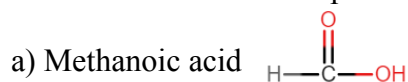


29. What is the name of the compound with the formula $\text{C}_5\text{H}_{10}\text{O}$?

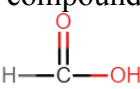
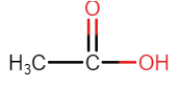
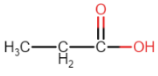
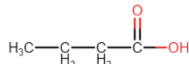


Carboxylic Acids

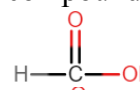
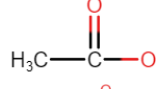
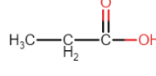
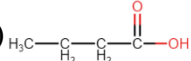
30. What is the name of the compound with the formula CH_3COOH ?



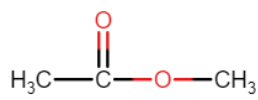
31. What is the name of the compound with the formula C_2H_5COOH ?

- a) Methanoic acid 
- b) Ethanoic acid 
- c) Propanoic acid (Correct) 
- d) Butanoic acid 

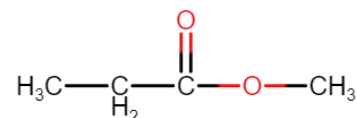
32. What is the name of the compound with the formula C_3H_7COOH ?

- a) Methanoic acid 
- b) Ethanoic acid 
- c) Propanoic acid 
- d) Butanoic acid (Correct) 

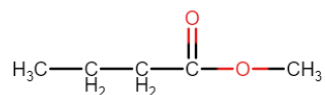
Esters

33. What is the name of the compound with the formula CH_3COOCH_3 ? 

- a) Methyl methanoate
- b) Methyl ethanoate (Correct)
- c) Ethyl methanoate
- d) Ethyl ethanoate

34. What is the name of the compound with the formula $C_2H_5COOCH_3$? 

- a) Methyl methanoate
- b) Methyl ethanoate
- c) Ethyl methanoate
- d) Methyl propanoate (Correct)

35. What is the name of the compound with the formula $C_3H_7COOCH_3$? 

- a) Methyl methanoate

- b) Methyl ethanoate
- c) Ethyl methanoate
- d) Methyl butanoate (Correct)

Ethers

36. What is the name of the compound with the formula CH_3OCH_3 ? $\text{H}_3\text{C}-\text{O}-\text{CH}_3$

- a) Methoxymethane (Correct)
- b) Methoxyethane
- c) Ethoxymethane
- d) Ethoxyethane

37. What is the name of the compound with the formula $\text{C}_2\text{H}_5\text{OCH}_3$? $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\text{O}-\text{CH}_3$

- a) Methoxymethane
- b) Methoxyethane (Correct)
- c) Ethoxymethane
- d) Ethoxyethane

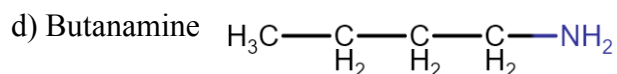
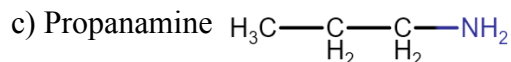
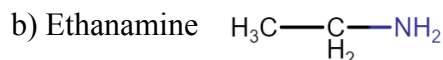
38. What is the name of the compound with the formula $\text{C}_3\text{H}_7\text{OCH}_3$? $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\text{O}-\text{CH}_3$

- a) Methoxymethane
- b) Methoxyethane
- c) Methoxypropane (Correct)
- d) Ethoxyethane

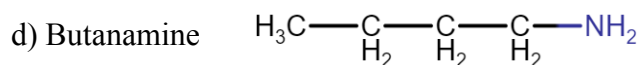
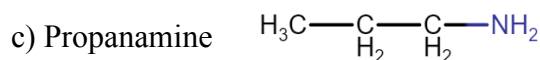
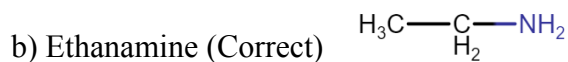
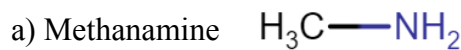
Amines

39. What is the name of the compound with the formula CH_3NH_2 ?

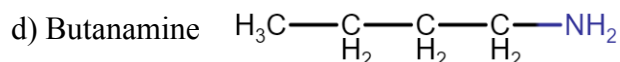
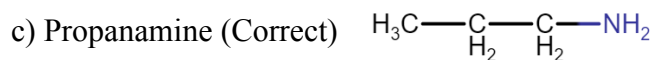
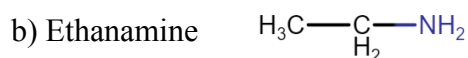
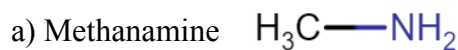
- a) Methanamine (Correct) $\text{H}_3\text{C}-\text{NH}_2$



40. What is the name of the compound with the formula $\text{C}_2\text{H}_5\text{NH}_2$?

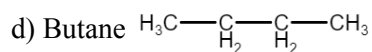
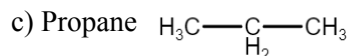
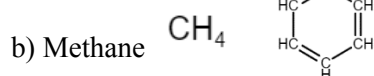
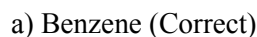


41. What is the name of the compound with the formula $\text{C}_3\text{H}_7\text{NH}_2$?

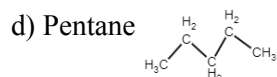
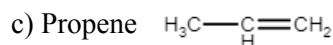
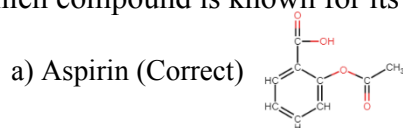
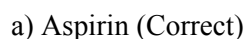


Aromatic and Delocalized Compounds

42. Which of the following compounds is aromatic and delocalized?

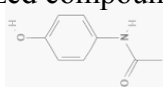


43. Which compound is known for its aromatic and delocalized structure?



44. Identify the aromatic and delocalized compound:

a) Acetaminophen (Correct)



b) Methanol $\text{H}_3\text{C}-\text{OH}$

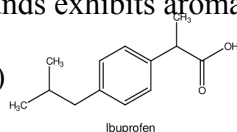
c) Ethane $\text{H}_3\text{C}-\text{CH}_3$

d) Cyclohexane



45. Which of these compounds exhibits aromaticity and delocalization?

a) Ibuprofen (Correct)



b) Propanol $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{OH}$

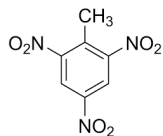
c) Butene $\text{H}_3\text{C}-\text{CH}_2-\text{CH}=\text{CH}_2$

d) Cyclo Hexane



46. Which compound is an example of an aromatic and delocalized molecule?

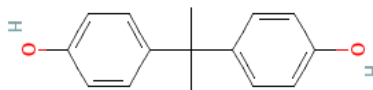
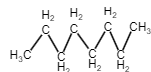
a) Trinitrotoluene (TNT) (Correct)



b) Propane $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_3$

c) Butanol $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{OH}$

d) Octane



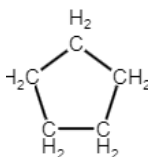
47. Name the aromatic and delocalized compound:

a) Epoxy resin (Correct)

b) Methane CH_4

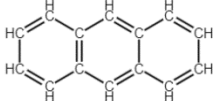
c) Ethanol $\text{H}_3\text{C}-\text{CH}_2-\text{OH}$

d) Cyclopentane



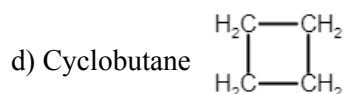
48. Which of the following is aromatic and delocalized?

a) Anthracene (Correct)

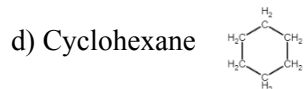
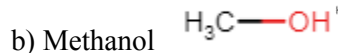


b) Butane $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}_3$

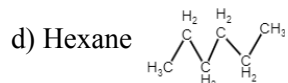
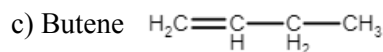
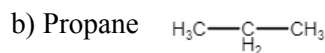
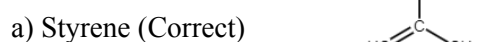
c) Propanol $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{OH}$



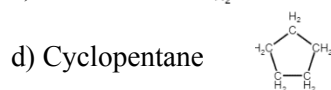
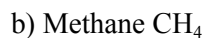
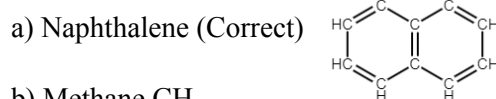
49. Identify the aromatic and delocalized compound:



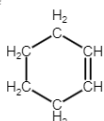
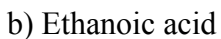
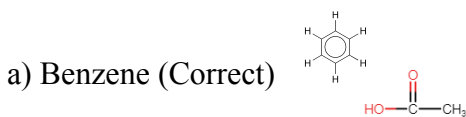
50. Which compound exhibits aromaticity and delocalization?



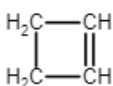
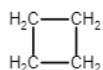
51. Which of these is aromatic and delocalized?



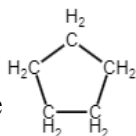
52. Which of these structures are aromatic and delocalized?



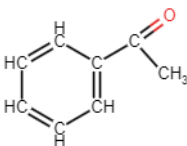
53. Identify the aromatic and delocalized compound:



b) Cyclobutene



c) Cyclopentane



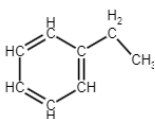
d) Acetophenone (Correct)

54. Which of these structures are aromatic and delocalized?

a) Ethane $\text{H}_3\text{C}-\text{CH}_3$

b) Ethanal $\text{H}_3\text{C}-\text{CH}=\text{O}$

c) Ethyl Benzene (Correct)



d) Ethanol $\text{H}_3\text{C}-\text{CH}_2-\text{OH}$



Hydrocarbons

55. Which of the following compounds is a hydrocarbon?

a) Methane CH_4 (Correct)

b) Methanol $\text{H}_3\text{C}-\text{OH}$

c) Acetone $\text{H}_3\text{C}-\text{C}(=\text{O})-\text{CH}_3$

d) Acetic acid $\text{H}_3\text{C}-\text{C}(=\text{O})-\text{OH}$

56. Identify the hydrocarbon:

a) Ethane (Correct) $\text{H}_3\text{C}-\text{CH}_3$

b) Ethanol $\text{H}_2\text{C}-\text{CH}_3$

c) Propanone $\text{H}_3\text{C}-\text{C}(=\text{O})-\text{CH}_3$

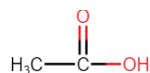
d) Propanoic acid $\text{H}_3\text{C}-\text{CH}_2-\text{C}(=\text{O})-\text{OH}$

57. Which compound is a hydrocarbon?

a) Propane (Correct) $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_3$

b) Propanol $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{OH}$

c) Acetaldehyde $\text{H}_3\text{C}-\text{CH}=\text{O}$



d) Acetic acid

58. Which of these compounds is a hydrocarbon?

a) Butane (Correct) $\text{H}_3\text{C}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{CH}_3$

b) Butanol $\text{H}_3\text{C}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{OH}$

c) Acetone $\text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_3$

d) Butanoic acid $\text{H}_3\text{C}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\overset{\text{O}}{\parallel}{\text{C}}-\text{OH}$

59. Name the hydrocarbon:

a) Pentane (Correct) $\text{H}_3\text{C}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{CH}_3$

b) Pentanol $\text{H}_3\text{C}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{OH}$

c) Acetaldehyde $\text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{CH}}$

d) Pentanoic acid $\text{H}_3\text{C}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\overset{\text{O}}{\parallel}{\text{C}}-\text{OH}$

60. Which of the following compounds is a hydrocarbon?

a) Hexane (Correct) $\text{H}_3\text{C}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{CH}_2-\text{CH}_3$

b)

c) Acetone $\text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_3$

d) Hexanoic acid $\text{H}_3\text{C}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\overset{\text{O}}{\parallel}{\text{C}}-\text{OH}$

61. Identify the hydrocarbon:

a) Heptane (Correct) $\text{H}_3\text{C}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{CH}_3$

b) Heptanol $\text{H}_3\text{C}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{OH}$

c) Acetaldehyde $\text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{CH}}$

d) Heptanoic acid $\text{H}_3\text{C}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\overset{\text{O}}{\parallel}{\text{C}}-\text{OH}$

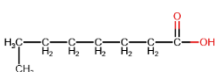
62. Which compound is a hydrocarbon?

a) Octane (Correct) $\text{H}_3\text{C}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{CH}_3$

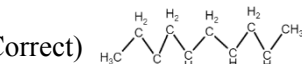
b) Octanol $\text{H}_3\text{C}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{C}_{\text{H}_2}-\text{OH}$

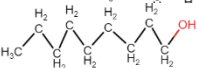
$\text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_3$


c) Acetone

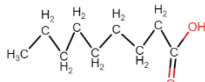
d) Octanoic acid 

63. Which of these compounds is a hydrocarbon?

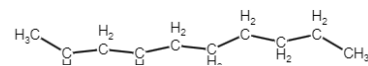
a) Nonane (Correct) 

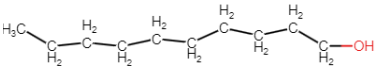
b) Nonanol 

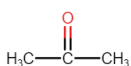
c) Acetaldehyde 

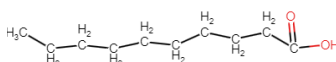
d) Nonanoic acid 

64. Name the hydrocarbon:

a) Decane (Correct) 

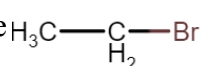
b) Decanol 

c) Acetone 

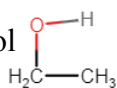
d) Decanoic acid 

65. Which of these structures is Alkene?

a) Ethylene (Correct) $\text{H}_2\text{C}=\text{CH}_2$

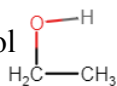
b) Bromoethane 

c) Ethanethiol

d) Ethanol 

66. Identify the Alkyl Halide:

a) Bromoethane (Correct) 

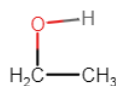
b) Ethanol 

c) Ethylene $\text{H}_2\text{C}=\text{CH}_2$

d) Ethanethiol

67. Which of these structures is alcohol?

a) Ethanethiol



b) Ethanol (Correct)

c) Ethylene $\text{H}_2\text{C}=\text{CH}_2$

d) Bromoethane $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\text{Br}$

68. Name the hydrocarbon:

a) Ethanol $\begin{array}{c} \text{O}-\text{H} \\ | \\ \text{H}_2\text{C}-\text{CH}_3 \end{array}$

b) Propene (Correct) $\text{H}_3\text{C}-\underset{\text{H}}{\text{C}}=\text{CH}_2$

c) Bromoethane $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\text{Br}$

d) Ethanethiol

69. Which of these structures are hydrocarbons?

a) Ethanol $\begin{array}{c} \text{O}-\text{H} \\ | \\ \text{H}_2\text{C}-\text{CH}_3 \end{array}$

b) Butyne (Correct) $\text{HC}\equiv\text{C}-\underset{\text{H}_2}{\text{C}}-\text{CH}_3$

c) Ethanethiol

d) Bromoethane $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\text{Br}$

70. Identify the Alkyl Halide:

a) Ethanol $\begin{array}{c} \text{O}-\text{H} \\ | \\ \text{H}_2\text{C}-\text{CH}_3 \end{array}$

b) Chloroethane $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\text{Cl}$

c) Ethylene (Correct) $\text{H}_2\text{C}=\text{CH}_2$

d) Ethanethiol

71. Which of these structures are hydrocarbons?

a) Bromoethane $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\text{Br}$

b) Ethanol $\begin{array}{c} \text{O}-\text{H} \\ | \\ \text{H}_2\text{C}-\text{CH}_3 \end{array}$

c) Pentane (Correct) $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\text{CH}_3$

d) Ethanethiol

72. Name the hydrocarbon:

- a) Butanol
- b) Octane (Correct)
- c) Ethanal
- d) Bromoethane

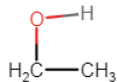
73. Which of these structures are hydrocarbons?

- a) Iso-pentane (Correct)
- b) Pentanol
- c) Hexanoic Acid
- d) Bromo Pentane

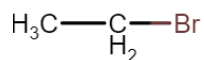
74. Identify the Aldehyde:

- a) Ethanal (Correct)

- b) Ethanol



- c) Bromoethane



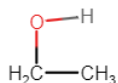
- d) Ethylene



75. Which of these structures are ketone?

- a) Ethanethiol
- b) Ethanol
- c) Acetone (Correct)
- d) Bromoethane

76. Name the Compound:



- a) Ethanol (Correct)
- b) Ethylene

c) Bromoethane

d) Ethanethiol

77. Which of these structures are hydrocarbons?

a) cyclohexane (Correct)

b) Bromoethane

c) Ethanethiol

d) Ethanol

78. Identify the hydrocarbon:

a) Ethanol

b) Benzene (Correct)

c) Ethanethiol

d) Bromoethane

79. Which of these structures are hydrocarbons?

a) Bromoethane $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\text{Br}$

b) Ethanol $\begin{array}{c} \text{O}-\text{H} \\ | \\ \text{H}_2\text{C}-\text{CH}_3 \end{array}$

c) Ethylene (Correct) $\text{H}_2\text{C}=\text{CH}_2$

d) Ethanethiol $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\text{SH}$

80. Which compound is a hydrocarbon?

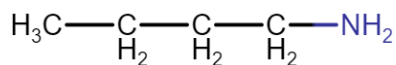
a) Methyl chloride $\text{H}_3\text{C}-\text{Cl}$

b) Propyne (Correct) $\text{HC}\equiv\text{C}-\text{CH}_3$

c) Ethyl acetate $\text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{C}}-\text{O}-\underset{\text{H}_2}{\text{C}}-\text{CH}_3$

d) Isopropyl alcohol $\begin{array}{c} \text{OH} \\ | \\ \text{H}_3\text{C}-\text{C}-\text{CH}_3 \\ | \\ \text{H} \end{array}$

81. Identify the hydrocarbon:



a) Butylamine

b) Butane (Correct) $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\text{CH}_3$

c) Butanoic acid $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\overset{\text{O}}{\parallel}{\text{C}}-\text{OH}$

d) Butyl chloride $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\overset{\text{Cl}}{\text{CH}_2}$

82. Which of these structures are hydrocarbons?

a) Ethylene oxide $\text{H}_2\text{C}-\overset{\text{O}}{\triangle}-\text{CH}_2$

b) Propene (Correct) $\text{H}_3\text{C}-\underset{\text{H}}{\text{C}}=\text{CH}_2$

c) Ethylamine $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\text{NH}_2$

d) Propanoic acid $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\overset{\text{O}}{\parallel}{\text{C}}-\text{OH}$

83. Name the hydrocarbon:

a) Methyl alcohol $\text{H}_3\text{C}-\text{OH}$

b) Ethylene (Correct) $\text{H}_2\text{C}=\text{CH}_2$

c) Ethyl chloride $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\text{Cl}$

d) Ethanol $\text{H}_2\text{C}-\underset{\text{CH}_3}{\overset{\text{O}-\text{H}}{\text{C}}}$

84. Which of these structures are hydrocarbons?

a) Isopropyl alcohol $\text{H}_3\text{C}-\underset{\text{H}}{\overset{\text{OH}}{\text{C}}}-\text{CH}_3$

b) Ethyne (Correct) $\text{HC}\equiv\text{CH}$

c) Acetone $\text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_3$

d) Ethyl acetate $\text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{C}}-\text{O}-\underset{\text{H}_2}{\text{C}}-\text{CH}_3$

85. Which of these structures are aromatic and delocalized?

a) Nitrobenzene (Correct) $\text{H}_2\text{C}=\text{CH}-\text{CH}=\text{CH}-\overset{\text{NO}_2}{\text{CH}}=\text{CH}_2$

b) Benzyl alcohol $\text{H}_2\text{C}-\underset{\text{H}_2}{\overset{\text{OH}}{\text{C}}}-\text{C}_6\text{H}_5$


c) Acetone $\text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_3$

d) Ethylamine $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\text{NH}_2$

86. Which compound belongs to the alkane group?

a) Ethylene $\text{H}_2\text{C}=\text{CH}_2$

b) Propane (Correct) $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\text{CH}_3$

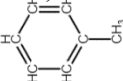
c) Benzene 


d) Acetylene $\text{HC}\equiv\text{CH}$

87. Identify the alkene in the options:

a) Butane $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\text{CH}_3$

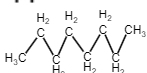
b) Ethene (Correct) $\text{H}_2\text{C}=\text{CH}_2$

c) Toluene 


d) Benzene 

88. Which structure represents an alkane?

a) Propene $\text{H}_3\text{C}-\underset{\text{H}}{\text{C}}=\text{CH}_2$

b) Octane (Correct) 

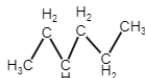
c) Ethyne $\text{HC}\equiv\text{CH}$


d) Benzene 

89. Name the alkene:

a) Butene (Correct) $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}}{\text{C}}=\text{CH}_2$

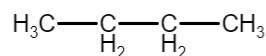
b) Pentane $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\text{CH}_3$

c) Hexane 

d) Benzene 

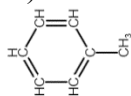
90. Which compound is an alkane?

a) Ethylene $\text{H}_2\text{C}=\text{CH}_2$

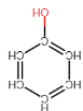


b) Butane (Correct)

c) Toluene



d) Phenol



91. Identify the alkene:

a) Methane CH_4

b) Ethylene (Correct) $\text{H}_2\text{C}=\text{CH}_2$

c) Benzene



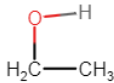
d) Propane $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\text{CH}_3$

92. Which of these is an alkane?

a) Propyne $\text{HC}\equiv\text{C}-\text{CH}_3$

b) Heptane (Correct) $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\text{CH}_3$

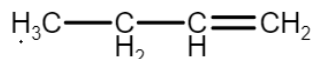
c) Ethanol



d) Benzene



93. Name the alkene:



a) Propene

b) 1-Butene (Correct)

c) 2-Butene

d) Ethene

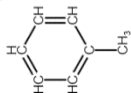
94. Identify the alkane in the options:

a) Ethylene $\text{H}_2\text{C}=\text{CH}_2$

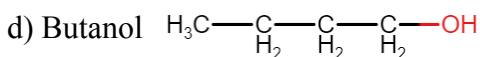
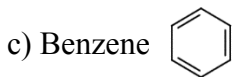
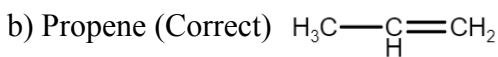
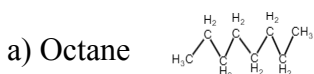
b) Pentane (Correct) $\text{H}_3\text{C}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\underset{\text{H}_2}{\text{C}}-\text{CH}_3$

c) Ethyne $\text{HC}\equiv\text{CH}$

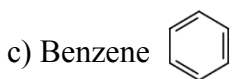
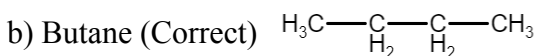
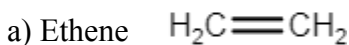
d) Toluene



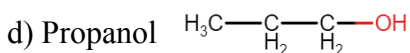
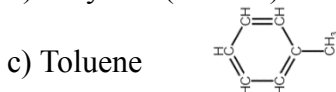
95. Which compound is an alkene?



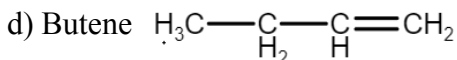
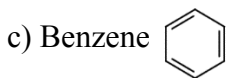
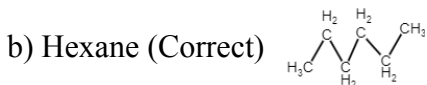
96. Which of these is an alkane?



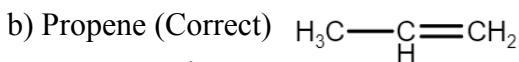
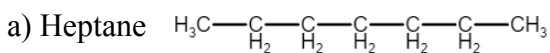
97. Identify the alkene:



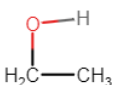
98. Identify the alkane in the options:



99. Which compound is an alkene?

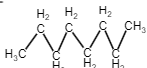


c) Benzene

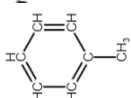
d) Ethanol 

100. Which of these is an alkane?

a) Butene $\text{H}_3\text{C}-\text{CH}_2-\text{CH}=\text{CH}_2$

b) Octane (Correct) 


c) Ethylene $\text{H}_2\text{C}=\text{CH}_2$

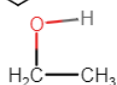
d) Toluene 

101. Name the alkene:

a) Propane $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_3$

b) Butene (Correct) $\text{H}_3\text{C}-\text{CH}_2-\text{CH}=\text{CH}_2$


c) Benzene 

d) Ethanol 

102. Identify the alkane in the options:

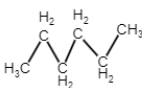
a) Ethyne $\text{HC}\equiv\text{CH}$

b) Decane (Correct)

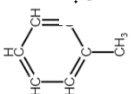
c) Benzene 

d) Propene $\text{H}_3\text{C}-\text{CH}=\text{CH}_2$

103. Which compound is an alkene?

a) Hexane 

b) Butene (Correct) $\text{H}_3\text{C}-\text{CH}_2-\text{CH}=\text{CH}_2$

c) Toluene 


d) Methanol $\text{H}_3\text{C}-\text{OH}$

104. Which of these is an alkane?



a) Ethene

b) Heptane (Correct) $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CH}_3$

c) Benzene 

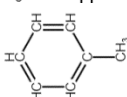
d) Butanol $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{OH}$

105. Name the alkene:

a) Methane CH_4

b) Ethylene (Correct) $\text{H}_2\text{C}=\text{CH}_2$

c) Propanol $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{OH}$


d) Toluene 

106. Which of these structures are aromatic and delocalized?

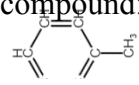
a) Ethylene $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{OH}$

b) Propanol

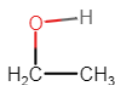
c) Propanol $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{OH}$

d) Benzene (Correct) 

107. Identify the aromatic compound:

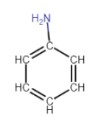
a) Toluene (Correct) 

b) Ethyl acetate $\text{H}_3\text{C}-\text{C}(=\text{O})-\text{O}-\text{CH}_2-\text{CH}_3$

c) Ethanol 

d) Propanol $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{OH}$

108. Which of these structures are aromatic and delocalized?

a) Aniline (Correct) 

b) Ethanol 

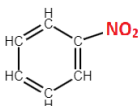
c) Butanoic acid $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{C}(=\text{O})-\text{OH}$

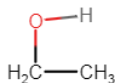
$\text{HC}\equiv\text{CH}$

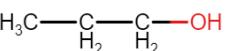
d) Ethyne

109. Which of these structures are aromatic and delocalized?

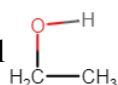
a) Butanoic acid 

b) Nitrobenzene (Correct) 

c) Ethanol 

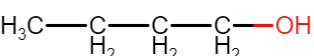
d) Propanol 

110. Identify the aromatic compound:

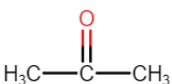
a) Ethanol 


b) Ethyne 

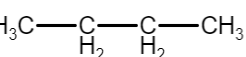
c) Benzene (Correct) 

d) Butanol 

111. Which of these structures are aromatic and delocalized?

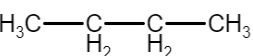
a) Acetone 

b) Pyridine (Correct) 

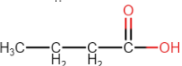
c) Butane 

d) Ethanol 

112. Which of these structures are aromatic and delocalized?

a) Butane 

b) Phenol (Correct) 

c) Butanoic acid 

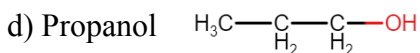
d) Ethyne 

113. Identify the aromatic compound:

a) Ethyne 



b) Benzene (Correct)



114. What is the atom economy of Kevlar?

- a) 70 %
- b) 77% (Correct)
- c) 100%
- d) 60 %

115. What is the atom economy of Nylon 6?

- a) 0 %
- b) 50 %
- c) 90%
- d) 100 % (Correct)

116. What is the atom economy of the modern green synthesis of ibuprofen?

- a) 0 %
- b) 50 %
- c) 90%
- d) 100 % (Correct)

117. What is the atom economy of the old industrial synthesis of Ibuprofen?

- a) 20 %
- b) 40 % (Correct)
- c) 50%
- d) 60 %

118. What is the atom economy of the modern green synthesis of Aspirin?

- a) 0 %
- b) 50 %
- c) 90%
- d) 100 % (Correct)

119. What ingredient does the old synthesis of Aspirin include?

- a) Willow Bark (Correct)
- b) Oats
- c) Gold
- d) Palm Tree Bark