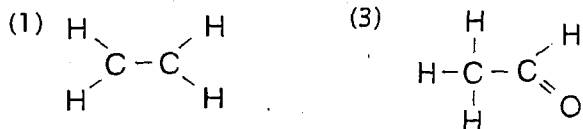


1. Which compound is a saturated hydrocarbon?

- (1) hexane (3) hexanol
(2) hexene (4) hexanal

2. Which structural formula *correctly* represents a hydrocarbon molecule?



3. Which hydrocarbon is saturated?

- (1) propene (3) butene
(2) ethyne (4) heptane

4. In saturated hydrocarbons, carbon atoms are bonded to each other by

- (1) single covalent bonds, only
(2) double covalent bonds, only
(3) alternating single and double covalent bonds
(4) alternating double and triple covalent bonds

Which compound is classified as a hydrocarbon?

- (1) ethane (3) chloroethane
(2) ethanol (4) ethanoic acid

6. Which formula represents a molecule of a saturated hydrocarbon?

- (1) C_2H_2
(2) C_4H_{10}
(3) C_5H_8
(4) C_6H_6

7. Which formula represents a saturated hydrocarbon?

- (1) C_2H_2
(2) C_2H_4
(3) C_3H_4
(4) C_3H_8

8. What is the general formula for the members of the alkane series?

- (1) C_nH_{2n}
(2) C_nH_{2n+2}
(3) C_nH_{2n-2}
(4) C_nH_{2n-6}

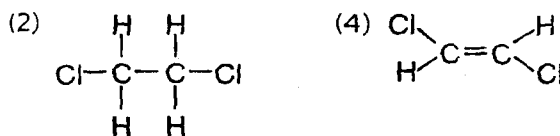
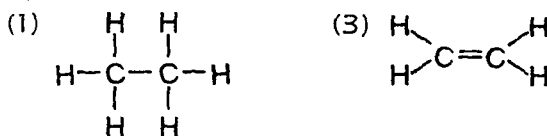
9. The formula for a saturated hydrocarbon is

- (1) C_6H_6
(2) C_6H_{10}
(3) C_6H_{12}
(4) C_6H_{14}

10. In which group could the hydrocarbons all belong to the same alkene series?

- (1) C_2H_2 , C_2H_4 , C_2H_6
(2) C_2H_2 , C_2H_4 , C_4H_8
(3) C_2H_4 , C_2H_6 , C_3H_6
(4) C_2H_4 , C_3H_6 , C_4H_8

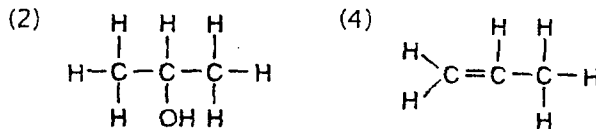
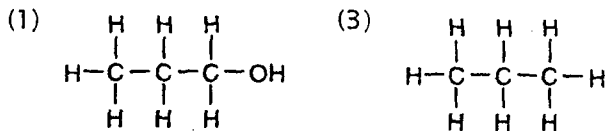
11. Which structural formula represents a saturated hydrocarbon?



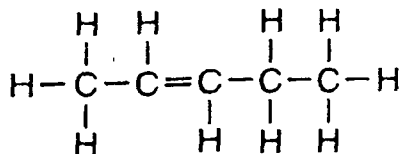
12. Natural gas is mostly comprised of

- (1) butane (3) methane
(2) ethane (4) propane

13. Which structural formula represents a saturated hydrocarbon?



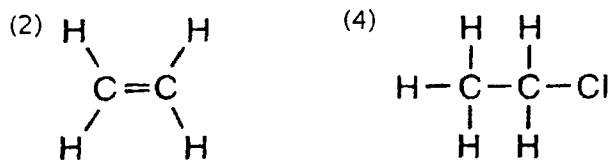
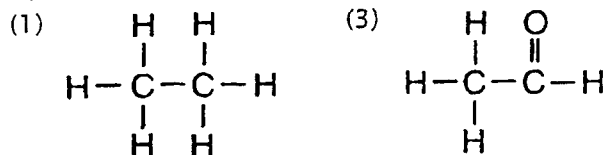
14. Given the formula:



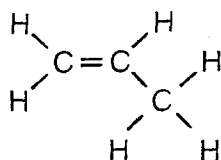
What is the IUPAC name of this compound?

- (1) 2-pentene (3) 2-butene
 (2) 2-pentyne (4) 2-butyne

15. Which formula represents an unsaturated hydrocarbon?



16. Given the structural formula:



What is the IUPAC name of this compound?

- (1) propane (3) propanone
 (2) propene (4) propanal

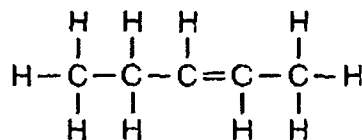
17. Which formula represents an unsaturated hydrocarbon?

- (1) C_2H_6
 (2) C_3H_8
 (3) C_5H_8
 (4) C_6H_{14}

18. Which organic compound is unsaturated?

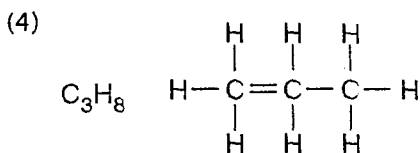
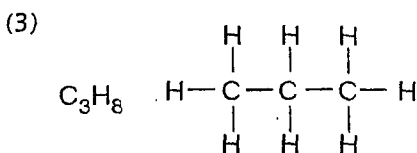
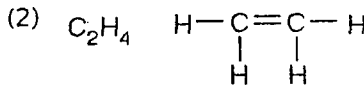
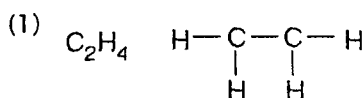
- (1) 2-methylbutane (3) 2-hexanol
 (2) 2-chloropropane (4) 2-pentene

19. What is the IUPAC name of the compound with the structural formula shown below?

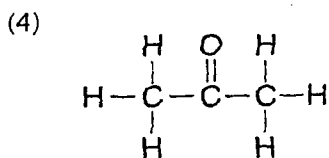
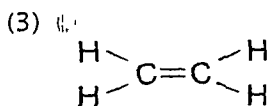
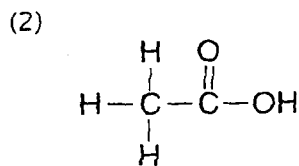
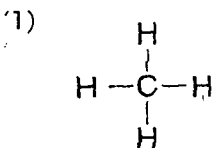


- (1) 2-pentene (3) 2-pentyne
 (2) 3-pentene (4) 3-pentyne

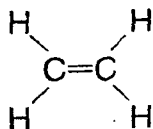
20. The empirical formula of a compound is CH_2 . Which molecular formula is correctly paired with a structural formula for this compound?



21. Which structural formula represents an unsaturated hydrocarbon?



22. What is the correct name for the substance represented by the structural formula below?



- (1) acetylene (3) ethene
(2) benzene (4) propene

23. What is the correct formula for butene?

- (1) C_4H_4
(2) C_4H_6
(3) C_4H_8
(4) C_4H_{10}

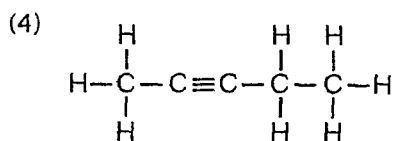
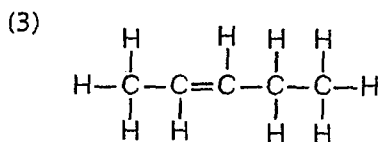
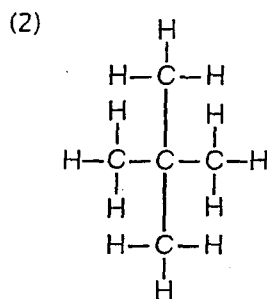
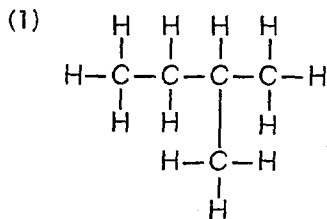
24. A molecular formula for an alkene is

- (1) C_2H_6
(2) C_2H_4
(3) $\text{C}_2\text{H}_5\text{COOH}$
(4) $\text{C}_6\text{H}_{12}\text{O}_6$

25. What is the total number of electron pairs that are shared between the two carbon atoms in a molecule of ethyne?

- (1) 1 (3) 3
(2) 2 (4) 4

26. Which structural formula represents 2-pentyne?



27. Atoms of which element can bond with each other to form ring and chain structures in compounds?

- (1) C (3) H
(2) Ca (4) Na

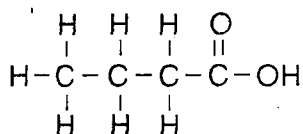
28. Which element has atoms that can bond with each other to form long chains or rings?

- (1) carbon (3) oxygen
(2) nitrogen (4) fluorine

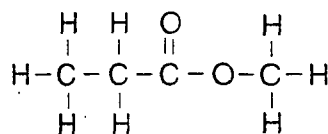
29. Which element must be present in an organic compound?

- (1) hydrogen (3) carbon
(2) oxygen (4) nitrogen

30. Given the structural formulas for two organic compounds:



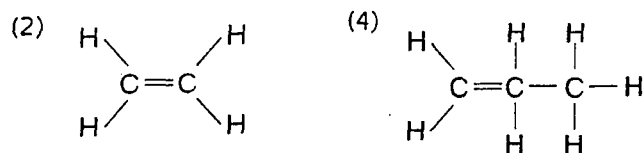
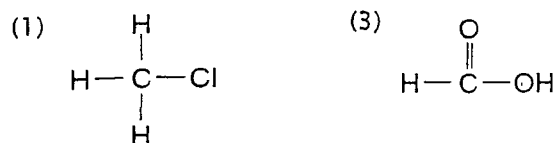
and



The differences in their physical and chemical properties are primarily due to their different

- (1) number of carbon atoms
 (2) number of hydrogen atoms
 (3) molecular masses
 (4) functional groups

31. Which structural formula is *incorrect*?



32. Organic compounds that are essentially non-polar and exhibit weak intermolecular forces have

- (1) low vapor pressure
 (2) low melting points
 (3) high boiling points
 (4) high electrical conductivity in solution

33. Which element is present in all organic compounds?

- (1) H (3) C
 (2) He (4) Ca

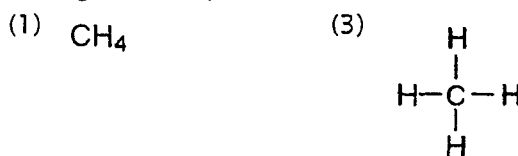
34. A characteristic of most organic compounds is that they

- (1) have low melting points
 (2) have high melting points
 (3) are soluble in water
 (4) conduct electricity when dissolved in water

35. In general, which property do organic compounds share?

- (1) high melting point
 (2) high electrical conductivity
 (3) readily soluble in water
 (4) slow reaction rate

36. Which representation is the structural formula of an organic compound?



37. The three isomers of pentane have different

- (1) formula masses (3) empirical formulas
 (2) molecular formulas (4) structural formulas

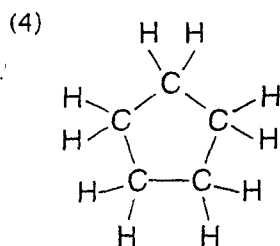
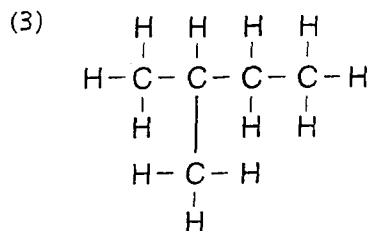
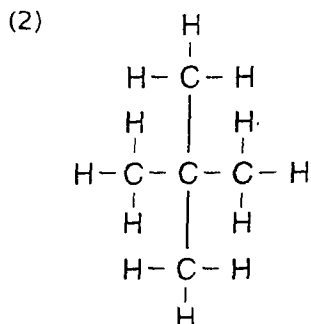
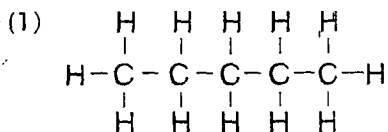
38. Which pair of compounds are isomers?

- (1) NO₂ and N₂O₄
 (2) P₂O₅ and P₄O₁₀
 (3) HCOOH and CH₃COOH
 (4) CH₃OCH₃ and C₂H₅OH

39. Molecules of 1-bromopropane and 2-bromopropane differ in

- (1) molecular formula
 (2) structural formula
 (3) number of carbon atoms per molecule
 (4) number of bromine atoms per molecule

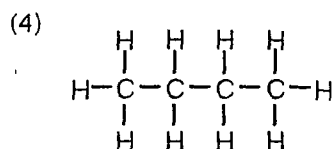
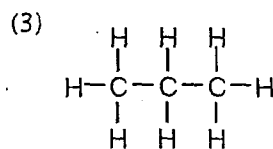
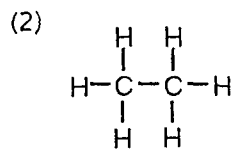
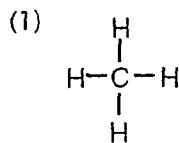
40. Which structural formula represents a molecule that is *not* an isomer of pentane?



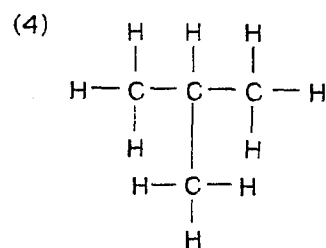
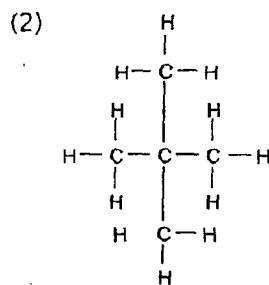
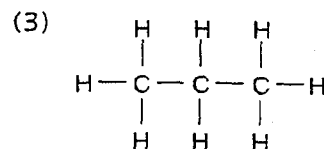
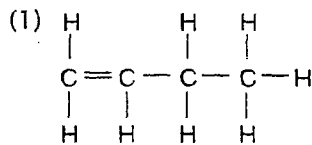
41. Which compound is an isomer of pentane?

- (1) butane (3) methyl butane
 (2) propane (4) methyl propane

42. Which compound has an isomer?



43. Which formula is an isomer of butane?

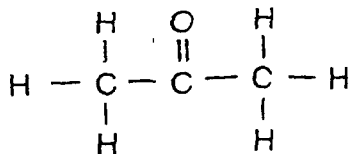


44. Which compounds are isomers?

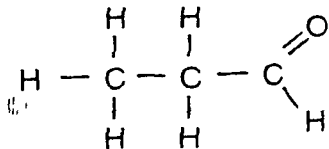
- (1) CH_3OH and $\text{CH}_3\text{CH}_2\text{OH}$
 (2) CH_4 and CCl_4
 (3) $\text{CH}_3\text{CH}_2\text{CHO}$ and CH_3COCH_3
 (4) $\text{CH}_3\text{CH}_2\text{OH}$ and $\text{CH}_3\text{CH}_2\text{COOH}$

45. Which structural formula represents an isomer of 1-propanol?

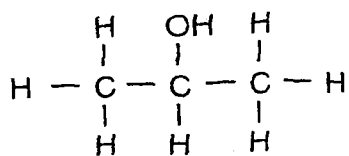
(1)



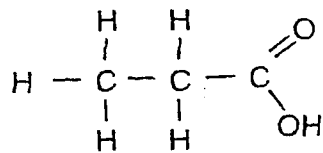
(2)



(3)



(4)



46. Molecules of 2-methyl butane and 2,2-dimethyl propane have different

- (1) structural formulas
- (2) molecular formulas
- (3) numbers of carbon atoms
- (4) numbers of covalent bonds

47. What is the maximum number of covalent bonds that can be formed by one carbon atom?

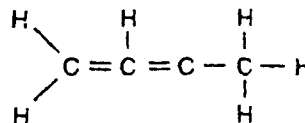
- (1) 1
- (2) 2
- (3) 3
- (4) 4

48. Which compound is an isomer of $\text{CH}_3\text{CH}_2\text{OH}$?

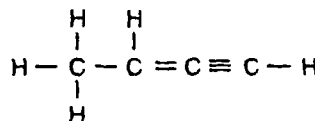
- (1) CH_3COOH
- (2) $\text{CH}_3\text{CH}_2\text{CH}_3$
- (3) CH_3OCH_3
- (4) CH_3COCH_3

49. Which structural formula *correctly* represents an organic compound?

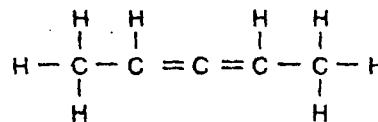
(1)



(2)



(3)



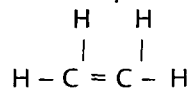
(4)



50. Which hydrocarbon has more than one possible structural formula?

- (1) CH_4
- (2) C_2H_6
- (3) C_3H_8
- (4) C_4H_{10}

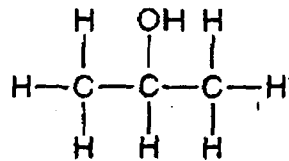
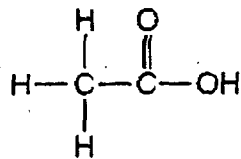
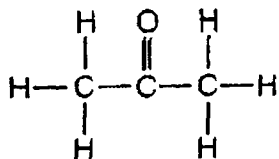
51. Given the compound:



The symbol = equals

- (1) one pair of shared electrons
- (2) two pairs of shared electrons
- (3) a single covalent bond
- (4) a coordinate covalent bond

52. Given the three organic structural formulas shown below:



Which organic compound classes are represented by these structural formulas, as shown from left to right?

(1) ester, organic acid, ketone

(3) ketone, aldehyde, alcohol

(2) ester, aldehyde, organic acid

(4) ketone, organic acid, alcohol

53. Which of these compounds has chemical properties most similar to the chemical properties of ethanoic acid?

(1) $\text{C}_3\text{H}_7\text{COOH}$

(2) $\text{C}_2\text{H}_5\text{OH}$

(3) $\text{C}_2\text{H}_5\text{COOC}_2\text{H}_5$

(4) $\text{C}_2\text{H}_5\text{OC}_2\text{H}_5$

54. The functional group $-\text{COOH}$ is found in

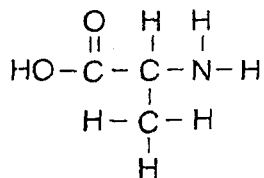
(1) esters

(3) alcohols

(2) aldehydes

(4) organic acids

55. The molecule below belongs to which class of compounds?



(1) alcohol

(3) aldehyde

(2) ester

(4) amino acid

56. Which formula represents ethanoic acid?

(1) CH_3CHO

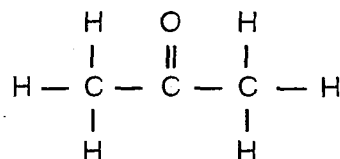
(2) CH_3COOH

(3) $\text{CH}_3\text{CH}_2\text{COOH}$

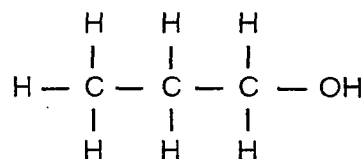
(4) $\text{CH}_3\text{CH}_2\text{CHO}$

57. Which structural formula represents an alcohol?

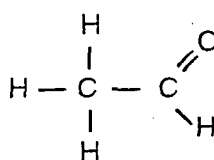
(1)



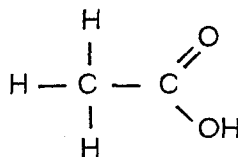
(2)



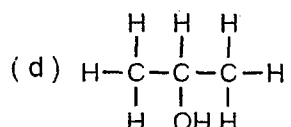
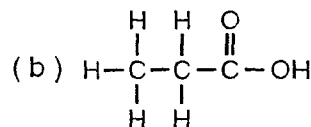
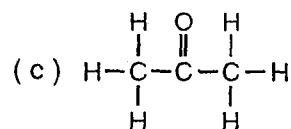
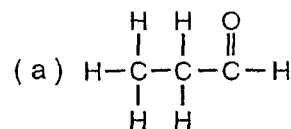
(3)



(4)



58. Given the formulas of four organic compounds:



Which pair below contains an alcohol and an acid?

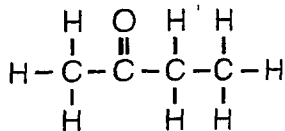
(1) a and b

(3) b and d

(2) a and c

(4) c and d

71. What is the IUPAC name of the compound with the following structural formula?



- (1) propanone (3) butanone
 (2) propanal (4) butanal

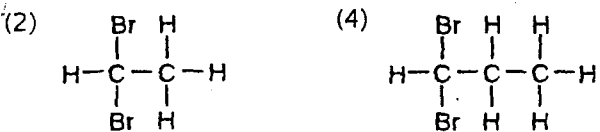
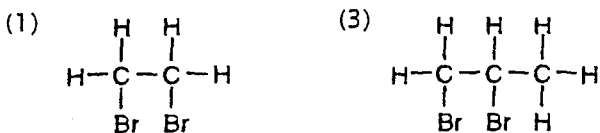
72. Which formula represents a ketone?

- (1) HCOOH
 (2) HCHO
 (3) CH₃COCH₃
 (4) CH₃CH₂OH

73. An example of a ketone is

- (1) propanone (3) propanal
 (2) propane (4) propanol

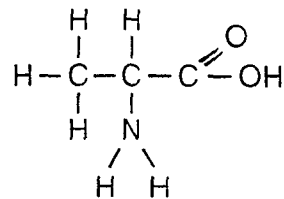
74. Which structural formula represents 1,1-dibromopropane?



75. The compound CH₃COOCH₃ is classified as

- (1) an acid (3) a hydrocarbon
 (2) an ester (4) an alcohol

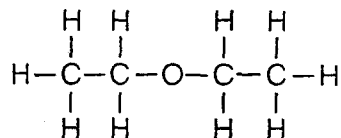
76. Given the structural formula:



This structural formula represents a molecule of

- (1) an aldehyde (3) a ketone
 (2) an ester (4) an amino acid

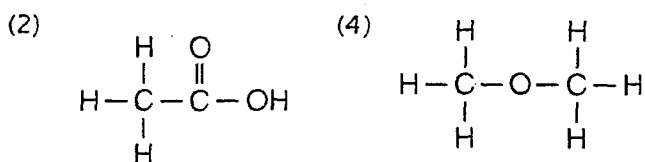
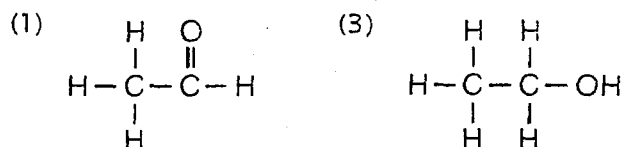
77. Given the structural formula:



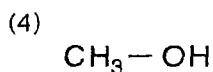
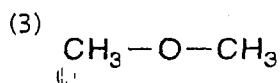
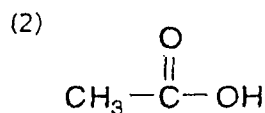
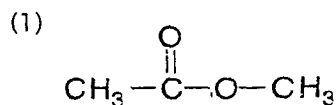
The compound represented by this formula can be classified as an

- (1) organic acid (3) ester
 (2) ether (4) aldehyde

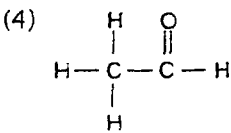
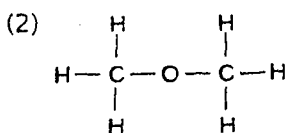
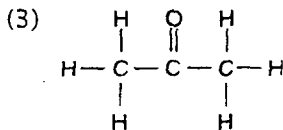
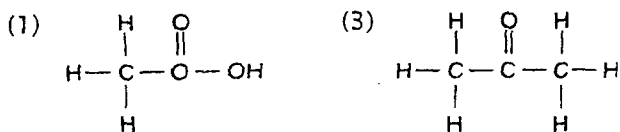
78. Which structural formula represents an ether?



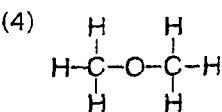
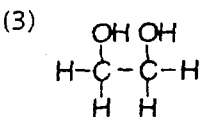
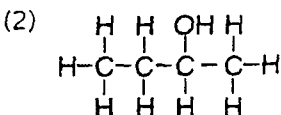
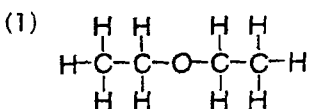
79. Which formula represents an ether?



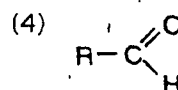
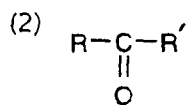
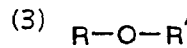
80. Which structural formula represents an ether?



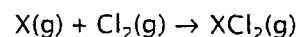
81. Which structural formula represents diethyl ether?



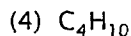
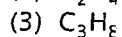
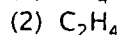
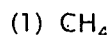
82. What is the general formula for an ether?



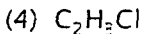
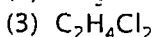
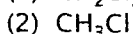
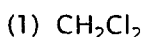
83. Given the incomplete equation representing an organic addition reaction:



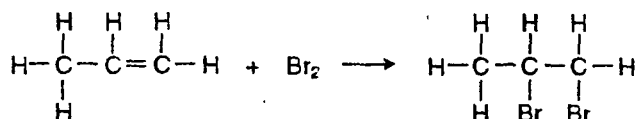
Which compound could be represented by X?



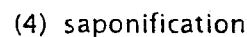
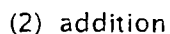
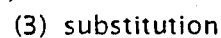
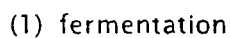
84. Which formula correctly represents the product of an addition reaction between ethene and chlorine?



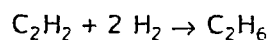
85. Given the organic reaction:



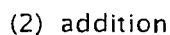
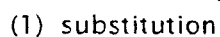
This reaction is an example of



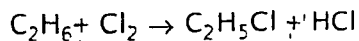
86. Given the reaction:



This reaction represents



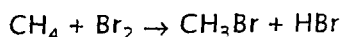
87. Given the equation:



This reaction is best described as

- (1) addition involving a saturated hydrocarbon
- (2) addition involving an unsaturated hydrocarbon
- (3) substitution involving a saturated hydrocarbon
- (4) substitution involving an unsaturated hydrocarbon

88. Given the equation:

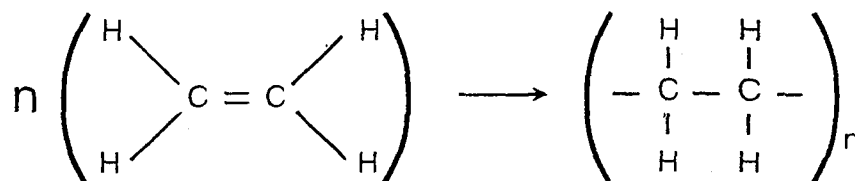


Which type of reaction does this equation represent?

- (1) addition
- (2) hydrogenation
- (3) polymerization
- (4) substitution

89. Which type of reaction is represented by the equation below?

Note: n and n are very large numbers equal to about 2000.



- | | |
|--|--|
| <p>90. The process of joining many small molecules into larger molecules is called</p> <ol style="list-style-type: none"> (1) neutralization (2) polymerization (3) saponification (4) substitution <p>91. Which organic reaction produces rubber and plastics?</p> <ol style="list-style-type: none"> (1) polymerization (2) esterification (3) saponification (4) fermentation <p>92. The reaction $n\text{C}_2\text{H}_4 \rightarrow (-\text{C}_2\text{H}_4-)_n$ is an example of</p> <ol style="list-style-type: none"> (1) saponification (2) esterification (3) polymerization (4) fermentation <p>93. Cellulose, protein, and starch are classified as</p> <ol style="list-style-type: none"> (1) aldehydes (2) esters (3) synthetic polymers (4) natural polymers | <p>94. Molecules of propene combine in a chemical reaction to produce a large single molecule. This reaction is called</p> <ol style="list-style-type: none"> (1) substitution (2) fermentation (3) polymerization (4) esterification <p>95. Which material is a synthetic polymer?</p> <ol style="list-style-type: none"> (1) starch (2) nylon (3) cellulose (4) protein <p>96. The reaction during which monomers are combined and water is released is called</p> <ol style="list-style-type: none"> (1) saponification (2) neutralization (3) addition polymerization (4) condensation polymerization <p>97. Proteins are produced through the process of</p> <ol style="list-style-type: none"> (1) addition (2) substitution (3) polymerization (4) combustion |
|--|--|

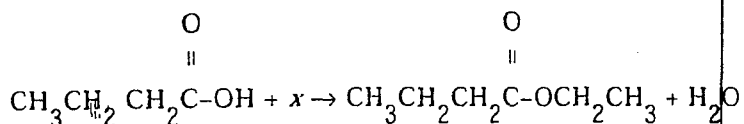
98. Given the reaction:



This reaction is an example of

- (1) fermentation (2) saponification (3) hydrogenation (4) esterification

99. Given the incomplete reaction:



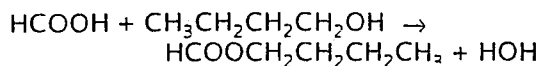
Which compound is represented by x?

- (1) $\text{CH}_3\text{CH}_2\text{OH}$ (3) $\text{CH}_3\text{OCH}_2\text{CH}_3$
 (2) $\text{CH}_3\text{C}-\text{H}$ (4) CH_3CCH_3

100. Which organic compounds are often used to create fragrances for the perfume industry?

- (1) ethers (3) alkanes
 (2) esters (4) alkynes

101. The organic reaction:



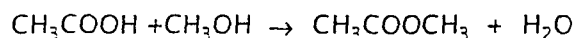
is an example of

- (1) fermentation (3) polymerization
 (2) saponification (4) esterification

 102. A reaction between CH_3COOH and an alcohol produced the ester $\text{CH}_3\text{COOCH}_3$. Which alcohol was used in the reaction?

- (1) CH_3OH
 (2) $\text{C}_2\text{H}_5\text{OH}$
 (3) $\text{C}_3\text{H}_7\text{OH}$
 (4) $\text{C}_4\text{H}_9\text{OH}$

103. In the reaction:



the organic product can best be identified as

- (1) an alcohol (3) an ester
 (2) a ketone (4) an acid

 104. Which alcohol reacts with $\text{C}_2\text{H}_5\text{COOH}$ to produce the ester $\text{C}_2\text{H}_5\text{COOC}_2\text{H}_5$?

- (1) CH_3OH
 (2) $\text{C}_2\text{H}_5\text{OH}$
 (3) $\text{C}_3\text{H}_7\text{OH}$
 (4) $\text{C}_4\text{H}_9\text{OH}$

 105. Which compound will react with CH_3COOH to form the ester methyl ethanoate?

- (1) CH_3OCH_3
 (2) CH_3COCH_3
 (3) CH_3OH
 (4) CH_3COOH

106. What are the two main products of a fermentation reaction?

- (1) ethanol and carbon dioxide
 (2) ethanol and water
 (3) sugar and carbon dioxide
 (4) sugar and water

107. What are the products of a fermentation reaction?

- (1) an alcohol and carbon monoxide
 (2) an alcohol and carbon dioxide
 (3) a salt and water
 (4) a salt and an acid

108. When butane burns in an excess of oxygen, the principal products are

- (1) CO_2 and H_2O
 (2) CO_2 and H_2
 (3) CO and H_2O
 (4) CO and H_2

109. When hydrocarbons burn completely in an excess of oxygen, the products are

- (1) carbon monoxide and water
 (2) carbon dioxide and water
 (3) carbon monoxide and carbon dioxide
 (4) carbon dioxide and carbon

10. In the presence of excess oxygen, hydrocarbons burn completely to form water and

- (1) CO
- (2) CO₂
- (3) C
- (4) CO₃²⁻

11. In which reaction is soap a product?

- (1) addition
- (2) substitution
- (3) saponification
- (4) polymerization

12. In which kind of reaction is soap one of the products?

- (1) oxidation
- (2) saponification
- (3) neutralization
- (4) fermentation

13. The principal products of saponification, a reaction between a fat and a base, are soap and

- (1) water
- (2) glycerol
- (3) carbon dioxide
- (4) ethyl alcohol

14. The hydrolysis of a fat by a base is called

- (1) saponification
- (2) esterification
- (3) polymerization
- (4) neutralization



Regents Review: Organic Chemistry
Answer Key

- | | | | |
|--------------|--------------|--------------|---------------|
| 1. <u>1</u> | 30. <u>4</u> | 59. <u>2</u> | 88. <u>4</u> |
| 2. <u>2</u> | 31. <u>4</u> | 60. <u>4</u> | 89. <u>4</u> |
| 3. <u>4</u> | 32. <u>2</u> | 61. <u>1</u> | 90. <u>2</u> |
| 4. <u>1</u> | 33. <u>3</u> | 62. <u>4</u> | 91. <u>1</u> |
| 5. <u>1</u> | 34. <u>1</u> | 63. <u>1</u> | 92. <u>3</u> |
| 6. <u>2</u> | 35. <u>4</u> | 64. <u>2</u> | 93. <u>4</u> |
| 7. <u>4</u> | 36. <u>3</u> | 65. <u>3</u> | 94. <u>3</u> |
| 8. <u>2</u> | 37. <u>4</u> | 66. <u>4</u> | 95. <u>2</u> |
| 9. <u>4</u> | 38. <u>4</u> | 67. <u>3</u> | 96. <u>4</u> |
| 10. <u>4</u> | 39. <u>2</u> | 68. <u>2</u> | 97. <u>3</u> |
| 11. <u>1</u> | 40. <u>4</u> | 69. <u>2</u> | 98. <u>4</u> |
| 12. <u>3</u> | 41. <u>3</u> | 70. <u>2</u> | 99. <u>1</u> |
| 13. <u>3</u> | 42. <u>4</u> | 71. <u>3</u> | 100. <u>2</u> |
| 14. <u>1</u> | 43. <u>4</u> | 72. <u>3</u> | 101. <u>4</u> |
| 15. <u>2</u> | 44. <u>3</u> | 73. <u>1</u> | 102. <u>1</u> |
| 16. <u>2</u> | 45. <u>3</u> | 74. <u>4</u> | 103. <u>3</u> |
| 17. <u>3</u> | 46. <u>1</u> | 75. <u>2</u> | 104. <u>2</u> |
| 18. <u>4</u> | 47. <u>4</u> | 76. <u>4</u> | 105. <u>3</u> |
| 19. <u>1</u> | 48. <u>3</u> | 77. <u>2</u> | 106. <u>1</u> |
| 20. <u>2</u> | 49. <u>3</u> | 78. <u>4</u> | 107. <u>2</u> |
| 21. <u>3</u> | 50. <u>4</u> | 79. <u>3</u> | 108. <u>1</u> |
| 22. <u>3</u> | 51. <u>2</u> | 80. <u>2</u> | 109. <u>2</u> |
| 23. <u>3</u> | 52. <u>4</u> | 81. <u>1</u> | 110. <u>2</u> |
| 24. <u>2</u> | 53. <u>1</u> | 82. <u>3</u> | 111. <u>3</u> |
| 25. <u>3</u> | 54. <u>4</u> | 83. <u>2</u> | 112. <u>2</u> |
| 26. <u>4</u> | 55. <u>4</u> | 84. <u>3</u> | 113. <u>2</u> |
| 27. <u>1</u> | 56. <u>2</u> | 85. <u>2</u> | 114. <u>1</u> |
| 28. <u>1</u> | 57. <u>2</u> | 86. <u>2</u> | |
| 29. <u>3</u> | 58. <u>3</u> | 87. <u>3</u> | |

Regents Review: Organic Chemistry
Answer Key

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|--------------|--------------|--------------|---------------|
| 1. <u>1</u> | 30. <u>4</u> | 59. <u>2</u> | 88. <u>4</u> |
| 2. <u>2</u> | 31. <u>4</u> | 60. <u>4</u> | 89. <u>4</u> |
| 3. <u>4</u> | 32. <u>2</u> | 61. <u>1</u> | 90. <u>2</u> |
| 4. <u>1</u> | 33. <u>3</u> | 62. <u>4</u> | 91. <u>1</u> |
| 5. <u>1</u> | 34. <u>1</u> | 63. <u>1</u> | 92. <u>3</u> |
| 6. <u>2</u> | 35. <u>4</u> | 64. <u>2</u> | 93. <u>4</u> |
| 7. <u>4</u> | 36. <u>3</u> | 65. <u>3</u> | 94. <u>3</u> |
| 8. <u>2</u> | 37. <u>4</u> | 66. <u>4</u> | 95. <u>2</u> |
| 9. <u>4</u> | 38. <u>4</u> | 67. <u>3</u> | 96. <u>4</u> |
| 10. <u>4</u> | 39. <u>2</u> | 68. <u>2</u> | 97. <u>3</u> |
| 11. <u>1</u> | 40. <u>4</u> | 69. <u>2</u> | 98. <u>4</u> |
| 12. <u>3</u> | 41. <u>3</u> | 70. <u>2</u> | 99. <u>1</u> |
| 13. <u>3</u> | 42. <u>4</u> | 71. <u>3</u> | 100. <u>2</u> |
| 14. <u>1</u> | 43. <u>4</u> | 72. <u>3</u> | 101. <u>4</u> |
| 15. <u>2</u> | 44. <u>3</u> | 73. <u>1</u> | 102. <u>1</u> |
| 16. <u>2</u> | 45. <u>3</u> | 74. <u>4</u> | 103. <u>3</u> |
| 17. <u>3</u> | 46. <u>1</u> | 75. <u>2</u> | 104. <u>2</u> |
| 18. <u>4</u> | 47. <u>4</u> | 76. <u>4</u> | 105. <u>3</u> |
| 19. <u>1</u> | 48. <u>3</u> | 77. <u>2</u> | 106. <u>1</u> |
| 20. <u>2</u> | 49. <u>3</u> | 78. <u>4</u> | 107. <u>2</u> |
| 21. <u>3</u> | 50. <u>4</u> | 79. <u>3</u> | 108. <u>1</u> |
| 22. <u>3</u> | 51. <u>2</u> | 80. <u>2</u> | 109. <u>2</u> |
| 23. <u>3</u> | 52. <u>4</u> | 81. <u>1</u> | 110. <u>2</u> |
| 24. <u>2</u> | 53. <u>1</u> | 82. <u>3</u> | 111. <u>3</u> |
| 25. <u>3</u> | 54. <u>4</u> | 83. <u>2</u> | 112. <u>2</u> |
| 26. <u>4</u> | 55. <u>4</u> | 84. <u>3</u> | 113. <u>2</u> |
| 27. <u>1</u> | 56. <u>2</u> | 85. <u>2</u> | 114. <u>1</u> |
| 28. <u>1</u> | 57. <u>2</u> | 86. <u>2</u> | |
| 29. <u>3</u> | 58. <u>3</u> | 87. <u>3</u> | |
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