Organic: Names & diagrams

1. The correct name for the following diagram is
2. 5-ethyl-4-methyloct-2-yne
3. 1-propyl-2-ethyl-3-methylhex- 4-yne
4. 4-ethyl-5-methyloct-6-yne
5. 4-methyl-5-propylhept-2-yne
6. The name for condensed structural formula CH3 C(CH3)2 CCCH3 is
7. Hept-2-yne
8. 2, 2-methylpent-3-yne
9. 2, 2-dimethylpent-2-yne
10. 4, 4-dimethylpent-2-yne

3. Ethyl butanoate is a substance which is used as an artificial peach flavour. The correct molecular formula for ethyl butanoate is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a) C4H9COOC2H5 b) CH3COOC4H9

c) C3H7COOC2H5 d) C2H5COOCH3

4. Which of the following is an INCORRECT name for CH3COOH(aq)?

a) ethanedioic acid b) ethanoic acid

c) acetic acid d) vinegar

5. The correct IUPAC name for the substance sketched below is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Br Cl

1. 1-bromo-2-chlorobenzene
2. m-bromochlorobenzene
3. 1-chloro-2-bromobenzene
4. 1-bromo-2-chlorocyclohexane

6. Given the structural below, the correct IUPAC name for the compound is \_\_\_\_\_\_\_\_\_\_\_\_\_

**CH3 CH(CH3)CH2CH2CH3**

1. Dipropylmethane b) methylpentane

c) hexane d) 2-methylpentane

7. What is the correct structural formula for 3-chloro-1-pentene?

a) CH2CHCHClCH2CH3 b) CH3CHCCl2CHCH3

c) CH2CHCH2ClCH2CH3 d) CH3CH2CH2CClCH2

8. Choose the correct IUPAC name for the following structural diagram.

H H H F

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H- C = C – C – C – C – H

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H H H H

1. 1-fluoropent-4-ene b) 5-fluoropent-2-ene

c) 4-fluorobut-1-ene d) 5-fluoropent-1-ene

9. Choose the correct IUPAC name for

HOOC

1. Cyclohexanoic acid b) methylbenenoic acid

c) phenylmethanoic acid d) benzoic acid

10. A chemistry student named a compound 2-ethyl-3-methyl-2- pentene. When the student drew this structural diagram, he

realized that the name for the compound was incorrect. The name should have been \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. 3-methyl-4-ethylpent-2-ene b) 2,3-diethylbut-2-ene

c) 2-ethyl-2-methylpent-2-ene d) 3,4-dimethylhex-3-ene

11. Choose the correct IUPAC name for the following compound **CH3CH2OOCCH2CH3**

1. ethylpropanoate
2. propylethanoate
3. 3-oxypentan-2-one
4. Ethylpropanol

12. The correct line diagram for 3-methylbutan-1-ol is

a) OH

1. HO

1. HO
2. HO

13. Choose the correct IUPAC name for the following structural diagram.

**CH3CHC(CH3)CH2CH3**

1. 3-methylpent-2-ene b) 3-methylpent-3-ene

c) 3-ethylpentane d) 3-methylpent-3-yne

14. Choose the correct IUPAC name for **CH3C(OH)2CH(CH3) CH2CH3**

1. 3-methylpentan-2,2-diol b) 3-methylpentan-4,4-diol

c) 2,2-dihydroxy-3-methylpentane d) 3-ethylbutan-2,2-diol

15. Consider the following structural diagram. This structure belongs to the \_\_\_\_\_\_\_\_\_\_\_\_\_ group.

a) aliphatic b) aromatic

c) alkyne d) carboxylic acid

16. Give the correct name for the following compound. CH3CHC(CH3)CH3

a) 3-methylbut-2-ene

b) pent-3-ene

c) 2-methylbut-1-yne

d) 2-methylbut-2ene

17. The correct expanded formula for propan-2-ol is \_\_\_\_\_\_\_\_\_\_\_\_\_

a) CH2(OH)CH2CH3

b) CH3CH(OH)CH3

c) CH3CH(OH)CH2CH2CH3

d) CH3CH2CH(OH)CH2CH3

18. The correct IUPAC name for the condensed structural formula CH3C(CH3)C(CH3)CH2CH3 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. 3,4-dimethyl pent-3-ene

b) 2-methyl-3-ethyl but-2-ene

c) 2,3-dimethyl pent-2-ene

d) 2-ethyl-3-methyl but-2-ene

19. Consider the line diagrams for some organic compounds.

I II III IV

Which line diagrams above represent organic compounds that are structural isomers?

a) II and III b) I, III, and IV c) I, II and IV d) I and II

20. Consider the condensed structural formula : **CH3CHC(CH3)CH(C6H5)CH3.** The correct IUPAC name for this diagram is

1. 2-methyl-1-phenylbut-2-ene
2. 2-phenyl-3-methylpentane
3. 3,4-dimethyl-2-phenylbutane

d) 3-methyl-4-phenylpent-2-ene

21. Consider the condensed structural formula: **CH3CH(OH)CH(OH)CH2(OH).** The correct IUPAC name for this diagram is

a) propane-1,2,3-triol

b) butane-1,2,3-triol

c) propane-2,3,4-ol

d) 1,2,3-butane-triol

22. Consider the diagram below:

F Cl

C = C

Cl Cl

The correct IUPAC name for this diagram is

a) 1- fluoro-1,2,2-trichloro ethane

b) trichlorofluoroethene

c) fluorotrichloroethene

d) fluorotrichloroethene

23. The correct IUPAC name for the following line diagram is \_\_\_\_\_\_\_\_\_\_\_

a) 2,3 - dimethyl hex-4-ene

b) 4,5 - dimethy hex-2-ene

c) 4,5 - methyl hex-4 - ene

d) 2,3 - dimethyl hex-2-yne

24. The correct IUPAC name for the following **condensed** structural diagram is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**CH3CH2COOCH3**

a) methyl propanoate

b) butanoic acid

c) propyl methanoate

d) methyl propanoic acid

25. The correct name for the following structural diagram is \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CH3CH(CH3)CH2COOH**

a) 2-methyl butanoic acid

b) 3-methyl butanoic acid

c) methylbutanoate

c) isomethyl butanoate

26. The isomer of C4H9OH(l) shown below is a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_ alcohol.

OH

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CH3  - C – CH3

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CH3

a) primary

b) secondary

c) tertiary

d) carbonyl

Solutions:

* + - 1. A
      2. D
      3. C
      4. A
      5. A
      6. D
      7. A
      8. D
      9. D
      10. D
      11. A
      12. B
      13. A
      14. C
      15. B
      16. D
      17. B
      18. C
      19. B
      20. D
      21. B
      22. B
      23. B
      24. A
      25. B
      26. C