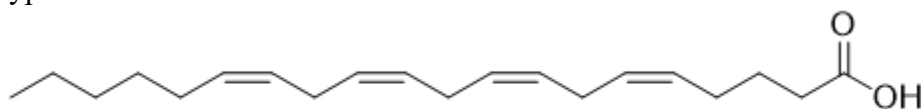


Name: _____

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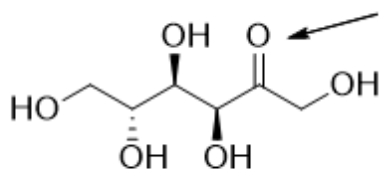
1. What type of biomolecule is shown below?



arachidonic acid

- a. a polyunsaturated fatty acid
- b. an amino acid
- c. a saturated fatty acid
- d. a sugar
- e. a nucleic acid

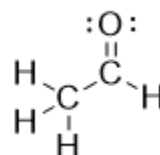
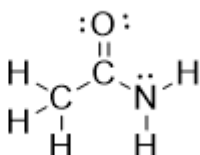
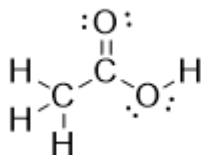
2. *D*-Fructose is a simple sugar. What is the functional group indicated by the arrow?



D-fructose

- a. polyol
- b. carboxylic acid
- c. aldehyde
- d. alcohol
- e. ketone

3. What do the following molecules have in common?

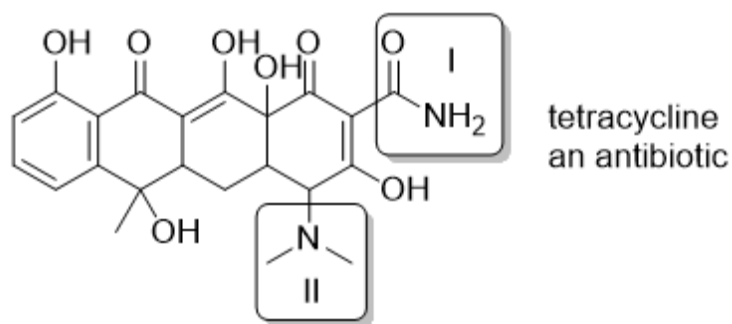


- a. a carbon with a linear molecular geometry
- b. They hydrogen bond with like molecules.
- c. a carbonyl-containing functional group
- d. an alcohol
- e. an ionic bond

4. Tetracycline is a common antibiotic. Select the choice in which the two boxed functional groups are correctly identified.

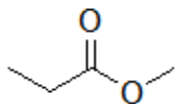
Name: _____

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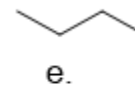
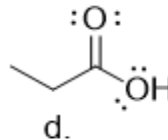
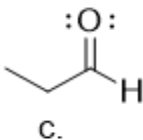
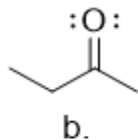
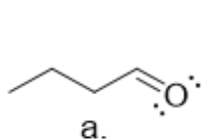


- I: amide; II: amine
 - These functional groups are neither amines nor amides.
 - I: amine; II: amide
 - I: amide; II: amide
 - I: amine; II: amine
5. Which molecules contain a carboxylic acid?
- HOCH_2CHO
 - $\text{CH}_3\text{CHOHCH}_2\text{COCH}_3$
 - $\text{CH}_3\text{CO}_2\text{H}$
 - CHOOCH_3
 - All of the above contain a carboxylic acid.

6. What is the name of the following ester?



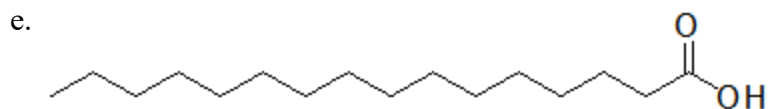
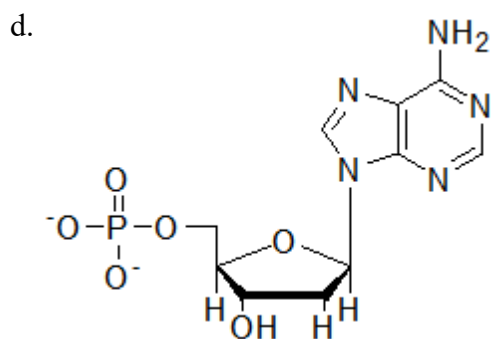
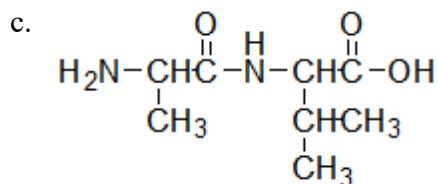
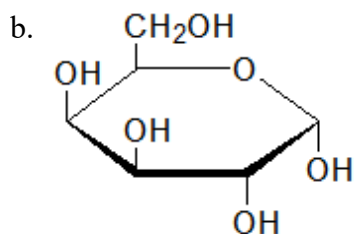
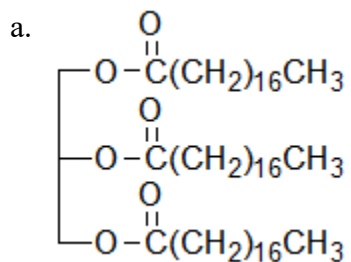
7. Which of the following molecules is an aldehyde?



- molecule a
 - molecule d
 - molecule e
 - molecule b
 - molecule c
8. Which biomolecule contains three ester functional groups?

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9. Which molecule is *N*-ethylpropanamide?

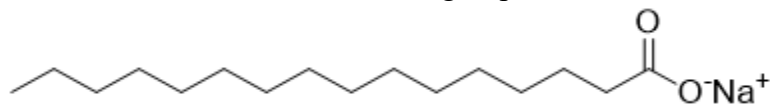
- a. $\text{CH}_3\text{CH}_2\text{CH}_2\text{CONHCH}_2\text{CH}_3$
- b. $\text{CH}_3\text{CONHCH}_2\text{CH}_2\text{CH}_3$
- c. $\text{CH}_3\text{CH}_2\text{CH}_2\text{NHCH}_2\text{CH}_3$

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10. Which BEST describes the functional groups in this molecule of soap?



a. a carboxylate group

b. an alcohol and a ketone

c. an alcohol and an aldehyde

d. a carboxylic acid

e. an alcohol, a sodium, and a carbonyl