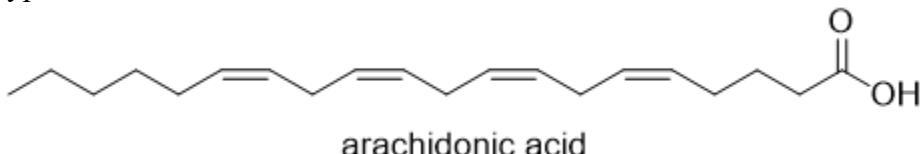


Name: \_\_\_\_\_

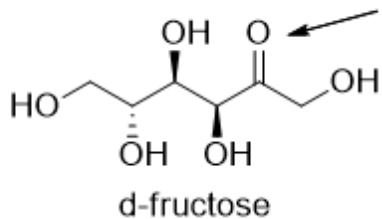
### **Ch 12 Homework assignment**

1. What type of biomolecule is shown below?



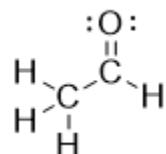
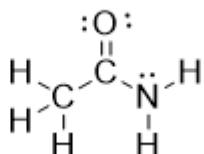
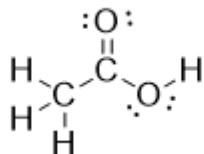
- a. a polyunsaturated fatty acid
- b. an amino acid
- c. a saturated fatty acid
- d. a sugar
- e. a nucleic acid

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



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

3. What do the following molecules have in common?

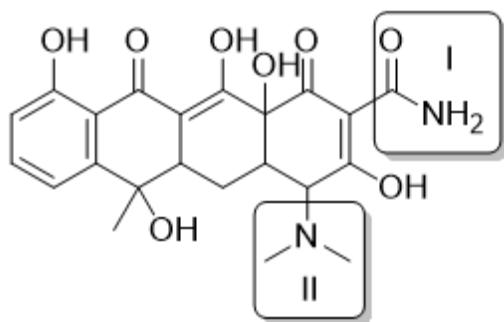


- a. a carbon with a linear molecular geometry
- b. They hydrogen bond with like molecules.
- c. a carbonyl-containing functional group
- d. an alcohol
- e. an ionic bond

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

Name: \_\_\_\_\_

### Ch 12 Homework assignment



tetracycline  
an antibiotic

a. I: amide; II: amine

b. These functional groups are neither amines nor amides.

c. I: amine; II: amide

d. I: amide; II: amide

e. I: amine; II: amine

5. Which molecules contain a carboxylic acid?

a. HOCH<sub>2</sub>CHO

b. CH<sub>3</sub>CHOHCH<sub>2</sub>COCH<sub>3</sub>

c. CH<sub>3</sub>CO<sub>2</sub>H

d. CHOOCH<sub>3</sub>

e. 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?

a.

b.

c.

d.

e.

a. molecule a

b. molecule d

c. molecule e

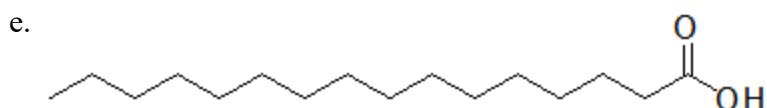
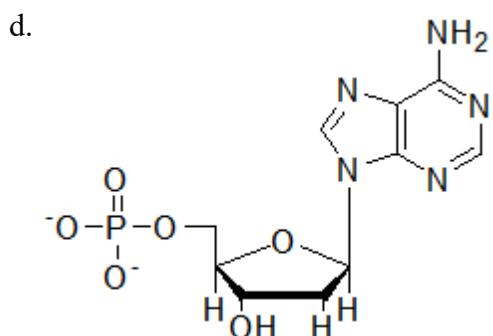
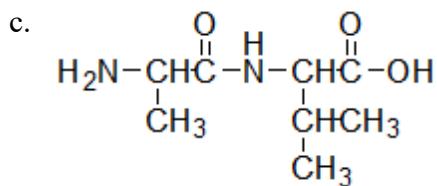
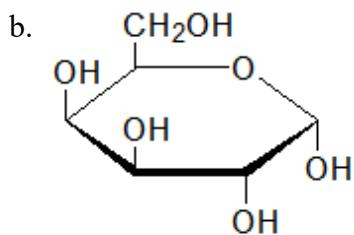
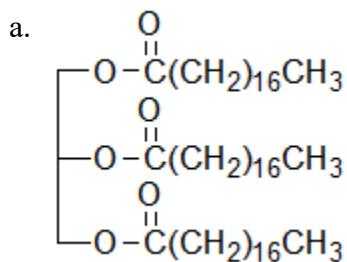
d. molecule b

e. molecule c

8. Which biomolecule contains three ester functional groups?

Name: \_\_\_\_\_

**Ch 12 Homework assignment**



9. Which molecule is *N*-ethylpropanamide?

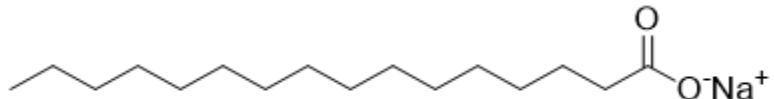
- a.  $\text{CH}_3\text{CH}_2\text{CH}_2\text{CONHCH}_2\text{CH}_3$
- b.  $\text{CH}_3\text{CONHCH}_2\text{CH}_2\text{CH}_3$
- c.  $\text{CH}_3\text{CH}_2\text{CH}_2\text{NHCH}_2\text{CH}_3$

Name: \_\_\_\_\_

**Ch 12 Homework assignment**



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