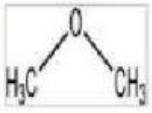
CHEMISTRY 11th

ORGANIC FUNCTIONAL GROUPS CLASSIFICATION

NAME: _____ **GRADE:** _____ **SCORE:** _____

1. Group the following molecules according to their similarities in structure. Organize these molecules in the table just by writing the letter that represent them. Do not forget to indicate the categories or classifications that made you decide why these molecules belong to the group. Have fun doing this activity. Good luck!

A



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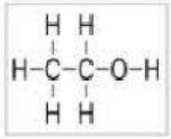

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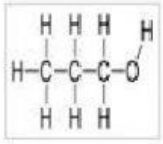

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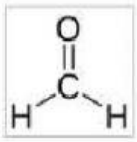

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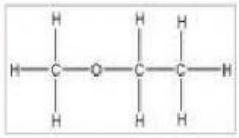

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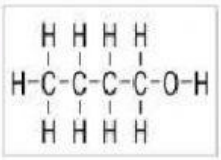

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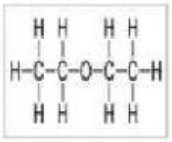

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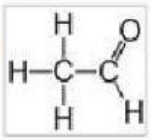
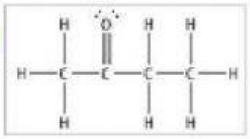


I



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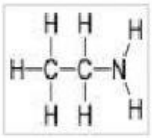

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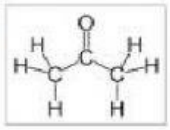

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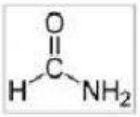

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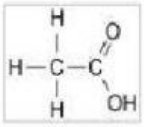

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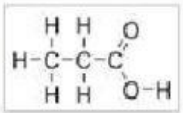

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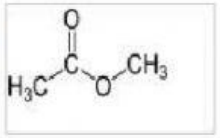
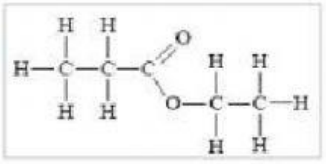


P



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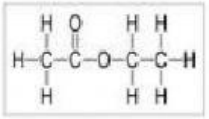

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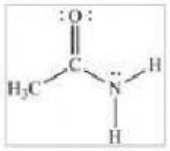
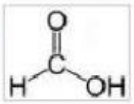


S

T



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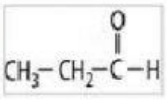


NOTE: Pay less attention to the number of carbon atoms. Give more attention to the elements or group of elements attached to carbon chain and to the type of bonds present in the structure.

CHEMISTRY 11th

ORGANIC FUNCTIONAL GROUPS CLASSIFICATION

Complete the table.

CATEGORIES / CLASSES					
organic compound with _____ attachment	organic compound with _____ attachment	organic compound with _____ attachment	organic compound with _____ attachment	organic compound with _____ attachment	organic compound with _____ attachment

2. Write the elements and the bonds that distinguish one functional group from the other:

Example: Alkanes: CARBON AND HYDROGEN, SIMPLE BOND

Alcohol

Aldehyde

Ketone

Carboxylic Acid

Ester

Ether

Amine

Amide

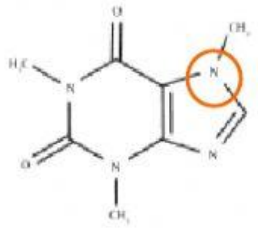
Phosphate

CHEMISTRY 11th

ORGANIC FUNCTIONAL GROUPS CLASSIFICATION

3. Identify the indicated functional group in the following molecules:

a. Caffeine



Indicated Functional Group: _____

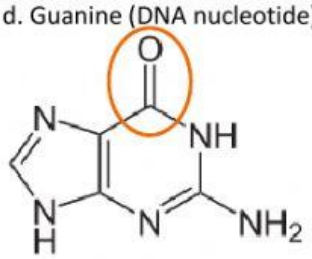
b. Serotonin

Indicated Functional Group: _____

c. Theobromine (Chocolate main compound)

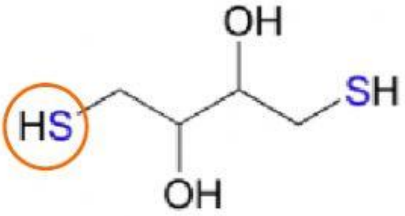
Indicated Functional Group: _____

d. Guanine (DNA nucleotide)



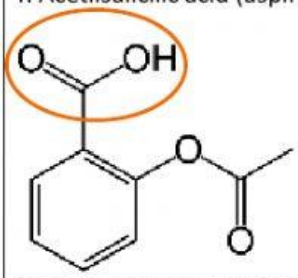
Indicated Functional Group: _____

e. dithiothreitol (oxidizing reagent)



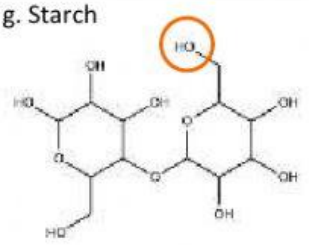
Indicated Functional Group: _____

f. Acetilsalicilic acid (aspirin)



Indicated Functional Group: _____

g. Starch

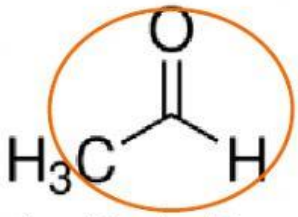


Indicated Functional Group: _____

h. Ethanol (liquor)

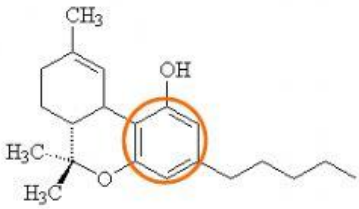
Indicated Functional Group: _____

i.Acetaldehyde(desinfectant)



Indicated Functional Group: _____

j. TetrahydroCannabinol



Indicated Functional Group: _____