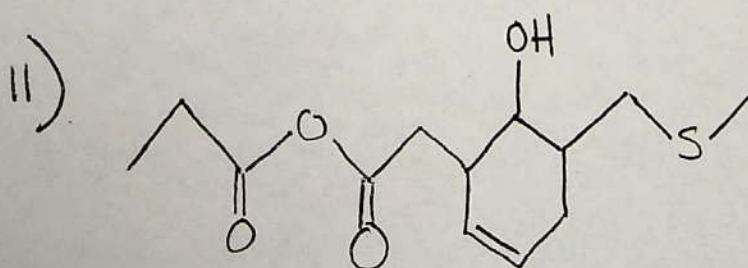
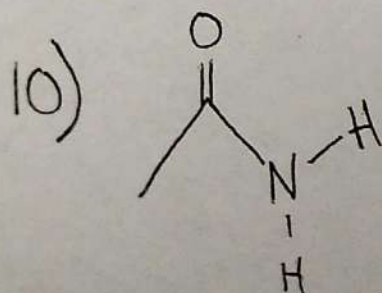
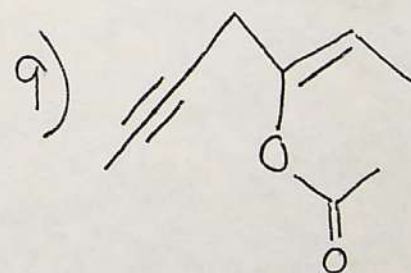
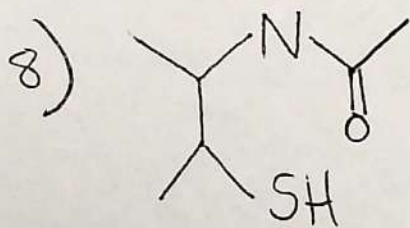
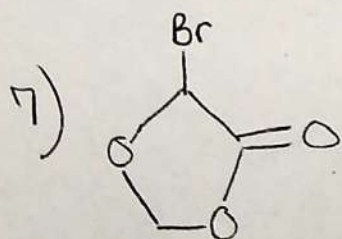
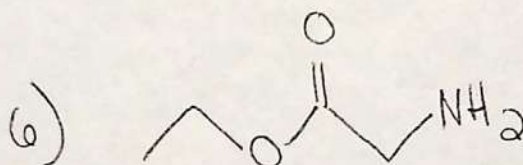
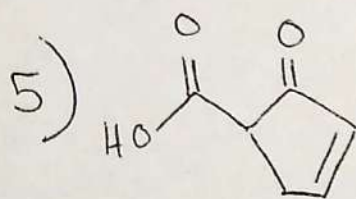
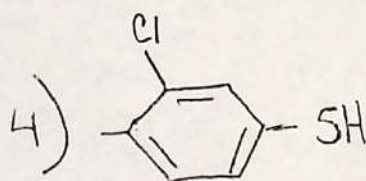
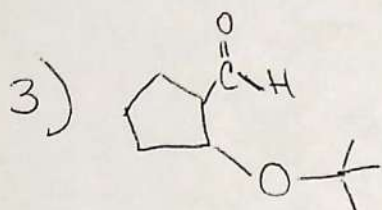
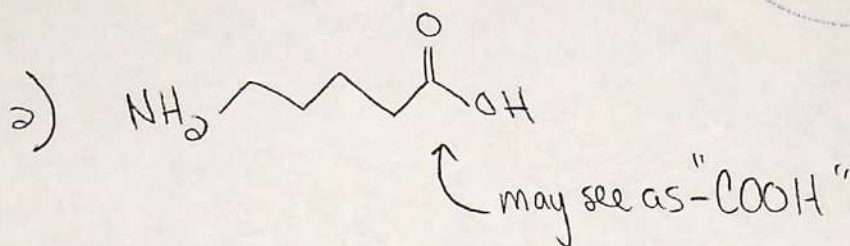
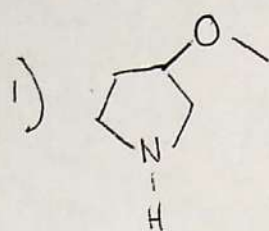
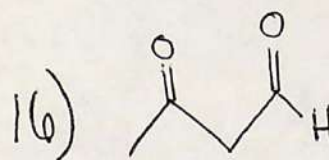
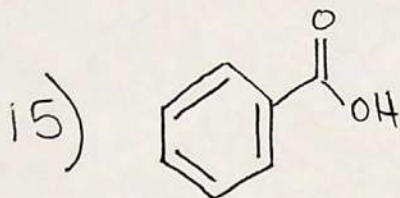
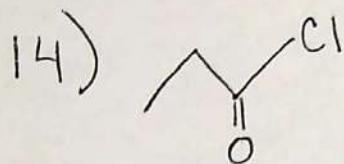
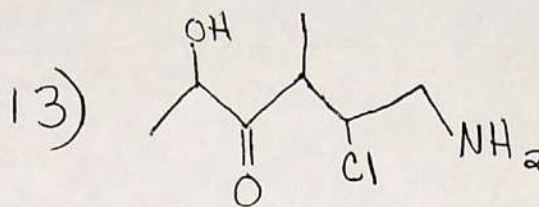
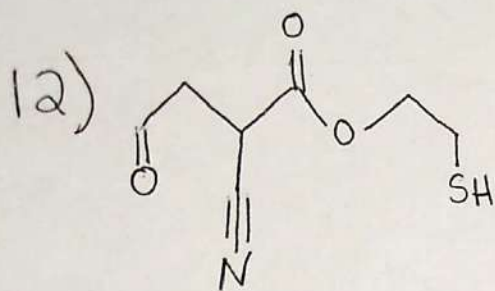


Organic Molecules w/ functional Groups

Chp 2.1 - Fundamentals

"Class Practice"





Draw the "generic" formula for each. What would the end of the name be?

17) halide

18) amine

19) amide

20) ester

21) ketone

22) carboxylic acid

23) nitrile

24) alcohol

25) aldehyde

26) carboxylic acid anhydride

27) Arene

28) alkane / alkene / alkyne

29) sulfide vs. thiol

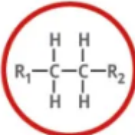
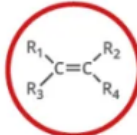
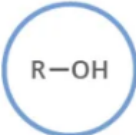
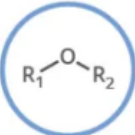
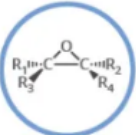
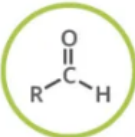
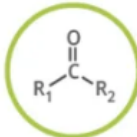
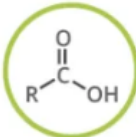
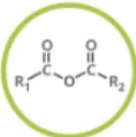
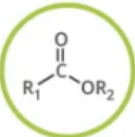
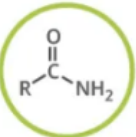
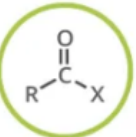
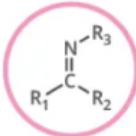
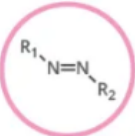
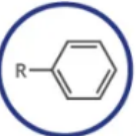
30) carboxylic acid chloride

Functional Groups In Order

Hierarchy	Functional Group	Class of Compound	Suffix
1	Abbreviation: -COOH 	Carboxylic acid	-oic acid
2		Ester	-oate
3	Abbreviation: -CHO 	Aldehyde	-al
4		Ketone	-one (<i>pronounced "own"</i>)
5	R-OH	Alcohol	-ol
6	R-NH₂ Primary Amine  Secondary Amine  Tertiary Amine	Amine	-amine
NO Functional Group			-e

Additional "Functional" groups (*some on the image are not technically FG's*)

FUNCTIONAL GROUPS ARE GROUPS OF ATOMS IN ORGANIC MOLECULES THAT ARE RESPONSIBLE FOR THE CHARACTERISTIC CHEMICAL REACTIONS OF THOSE MOLECULES. IN THE GENERAL FORMULAE SHOWN BELOW FOR EACH FUNCTIONAL GROUP, 'R' REPRESENTS THE REST OF THE MOLECULE, AND 'X' REPRESENTS ANY HALOGEN ATOM.

						
						
ALKANE Naming: -ane e.g. ethane	ALKENE Naming: -ene e.g. ethene	ALKYNE Naming: -yne e.g. ethyne	ALCOHOL Naming: -ol e.g. ethanol	ETHER Naming: -oxy -ane e.g. methoxyethane	EPOXIDE Naming: -ene oxide e.g. ethene oxide	HALOALKANE Naming: halo- e.g. chloroethane
						
ALDEHYDE Naming: -al e.g. ethanal	KETONE Naming: -one e.g. propanone	CARBOXYLIC ACID Naming: -oic acid e.g. ethanoic acid	ACID ANHYDRIDE Naming: -oic anhydride e.g. ethanoic anhydride	ESTER Naming: -yl -oate e.g. ethyl ethanoate	AMIDE Naming: -amide e.g. ethanamide	ACYL HALIDE Naming: -yl halide e.g. ethanoyl chloride
						
AMINE Naming: -amine e.g. ethanamine	NITRILE Naming: -nitrile e.g. ethanenitrile	IMINE Naming: -imine e.g. ethanimine	ISOCYANATE Naming: -yl isocyanate e.g. ethyl isocyanate	AZO COMPOUND Naming: -azo- e.g. azoethane	THIOL Naming: -thiol e.g. methanethiol	ARENE Naming: -yl benzene e.g. ethyl benzene