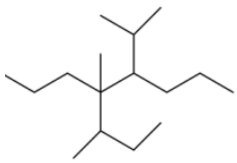
Pr. BELFERDI Fatiha

University MSB Jijel
Annex of medicine

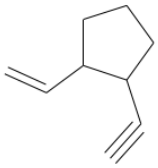
TD N°1: Organic Chemistry (Nomenclature)

Exercice 1

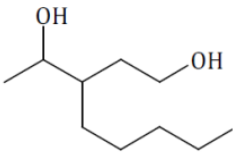
Name the following compounds according to the systematic IUPAC nomenclature.



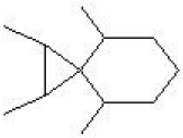
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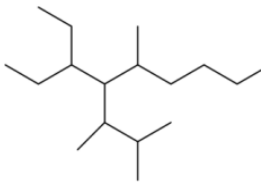
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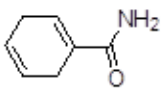
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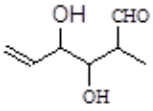
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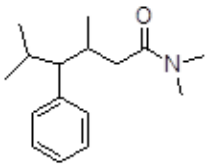
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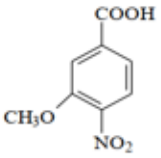
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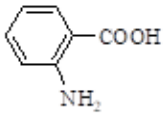
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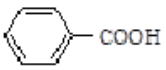
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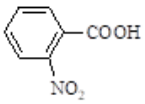
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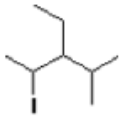
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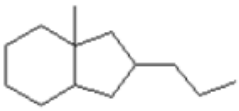
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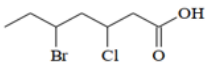
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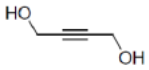
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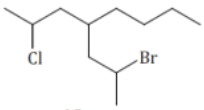
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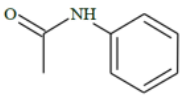
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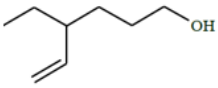
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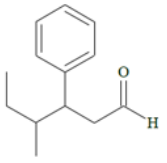
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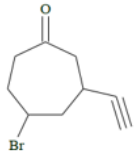
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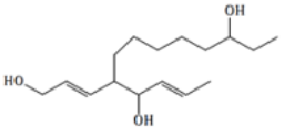
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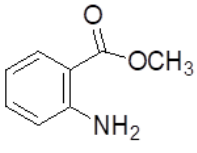
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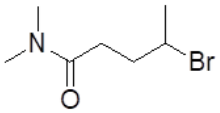
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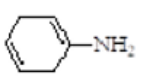
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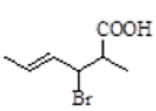
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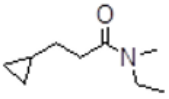
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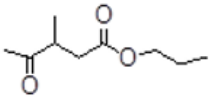
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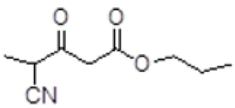
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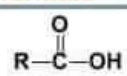
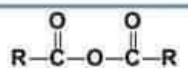
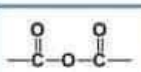
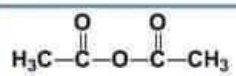
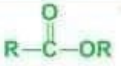
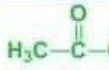
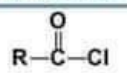
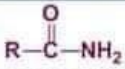
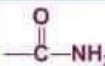
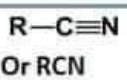
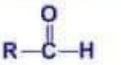
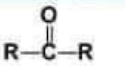
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Exercice 2

Convert the following names into molecular formulas

1) Cyclohexa-2,5-diene carbaldehyde
2) 4-(2-Ethylbutyl)decane
3) 5-amino-3-oxo heptanal
4) 4-Bromo-3-methylpent-3-en-1-yne
5) 1-Ethényl-4-nitrobenzene
6) 4-cyano pent-2-enoic acid
7) 4-formyl Cyclohexane ethyl carboxylate
8) 6-hydroxy non-1-en-4-one
9) Benzoate de 2-chloroethyle
10) N,N-Dimethylbenzamide
11) Cyclohexa-2,4-diene methyle carboxylate
12) 4-ethyl-5-methyl hex-2-yne
13) 2,2-dibromohexanedioïc acid
14) Cyclopentanecarbonitrile
15) 4-hydroxypentanoïc acid
16) 4-(1,1-dimethylethyl)benzoïc acid
17) 4-amino-3-hydroxy heptanoic acid
18) 4-cyano Cyclopentane carbaldehyde
19) 3,5-dimethyl -4-phenyl N-methyl haxanamide
20) 3-amino-7,7-dimethyl oct-1-yn-4-ol
21) m-isopropylbenzoic acid
22) aspirin
23) paracetamol

IUPAC nomenclature of organic compounds having different functional groups:

s. n.	Class or family	General structural formula	Functional group	Secondary suffix	Example
1	Carboxylic acid	 Or RCOOH	 Or -COOH	-oic acid	 (Ethanoic acid)
2	Sulphonic acid (sulfonic acid)	$R\text{-}SO_3H$	$-SO_3H$	-sulphonic acid	$CH_3\text{-}SO_3H$ (Methanesulphonic acid)
3	Acid anhydride			-oic anhydride	 (Ethanoic anhydride)
4	Ester	 Or RCOOR	 Or - COOR	-oate	 (Methyl ethanoate)
5	Acid chloride	 Or RCOCl	 -COCl	-oyl chloride	 (Ethanoyl chloride)
6	Acid amide	 Or $RCONH_2$	 Or $-CONH_2$	-amide	 (Ethanamide)
7	Nitrile	 Or RCN	-CN	-nitrile	 (Propanenitrile)
8	Aldehyde	 Or RCHO	 Or -CHO	-al	 (Ethanal)
9	Ketone			-one	 (Propanone)
10	Alcohol	R-OH	-OH	-ol	$CH_3\text{-}OH$ (Methanol)
11	Thioalcohol	R-SH	-SH	-thiol	$CH_3\text{-}SH$ (Methanethiol)
12	Amine	$R - NH_2$	$-NH_2$	-amine	$CH_3\text{-}NH_2$ (Methanamine)

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