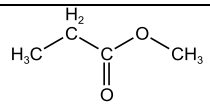
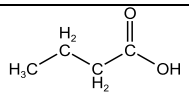
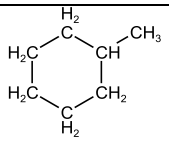
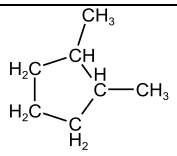
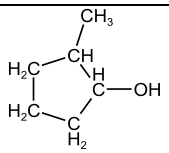
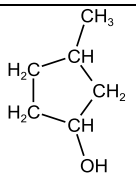
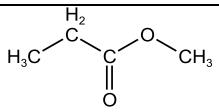
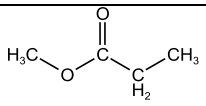
Series 3

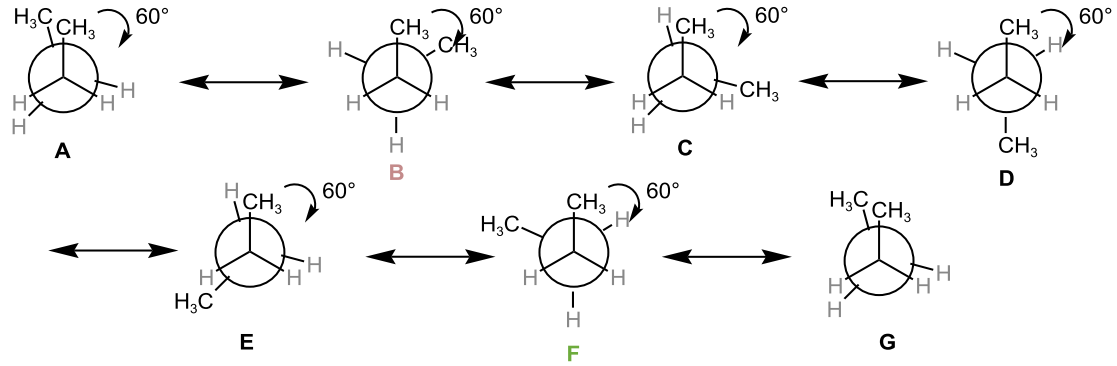
Exercise 1 :

Identify the pairs in each set as identical, without relationship or as structural isomers (functional isomer, position isomer, chain isomer or tautomer)

Compound A	Compound B	relationship
		
		
		
		

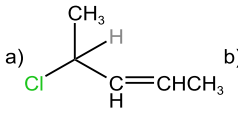
Exercise 2 :

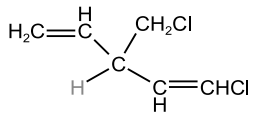
Classify the conformation forms of the n-butane, in order of decreasing energy.

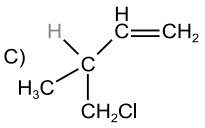


Exercise 3 :

Which of the following will not show geometrical isomerism?

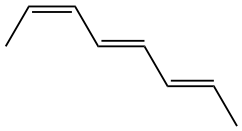

a)


b)


C)

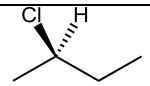
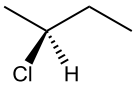
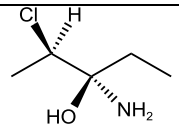
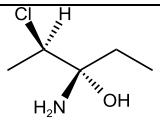
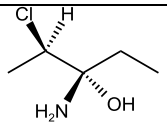
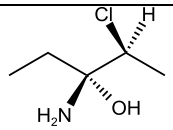
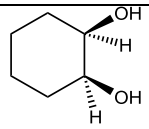
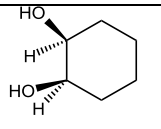
d) $H_3CHC{=}CHCH_2CH_3$

Give the IUPAC name of the compound:



Exercise 4 :

1. Mark the relationships between the following structures as either “same”, “enantiomers”, or “diastereomers”.
2. Give the name and the absolute cofiguration of each of them.

Isomer 1	Isomer 2	name	relationship
			
			
			
			

Exercise 5 :

Represent in flying –wedge and Newman the following molecule :

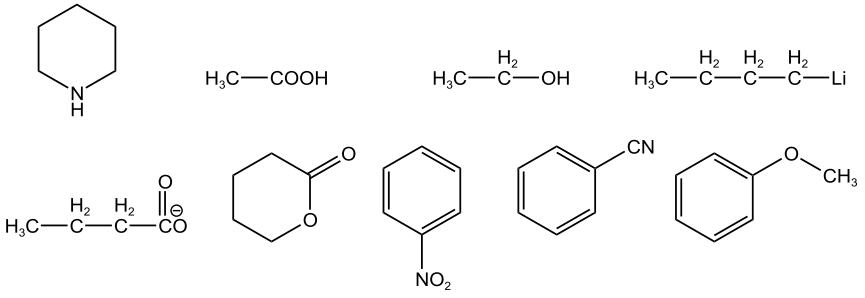
- (2S,3R)-2-bromo-3-chloro butane

Represent in flying –wedge and Fischer the following molecule :

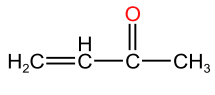
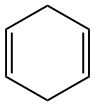
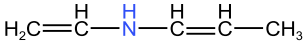
- (2S, 3S)- butane2,3-diol

Exercice 6

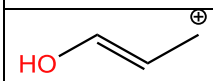
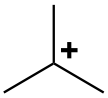
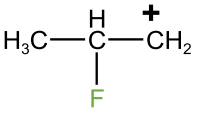
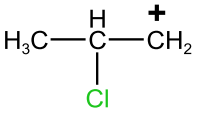
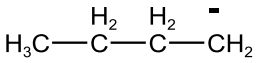
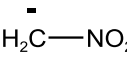
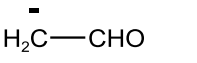
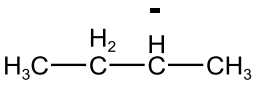
1. Show the direction of inductive effect amd mesomeric effect in following compounds



2. Which of the following compounds have delocalized electrons ?

1)  2)  3)  4) 

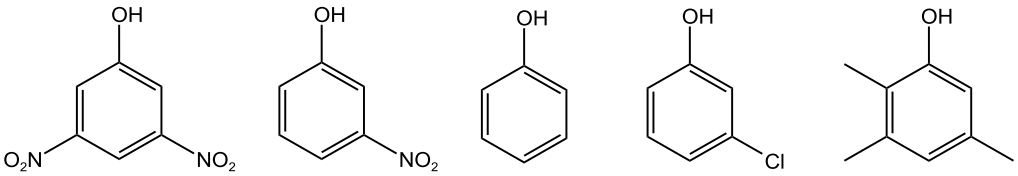
1. Arrange the following carbocations in decreasing order of their stability :

I	II	II	IV	Ranking
				
				

3. Arrange the following in decreasing order of acidity:

a. 1) $Cl_2CHCOOH$ 2) $ClCH_2COOH$ 3) CH_3COOH 4) Cl_3CCOOH

b.

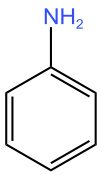
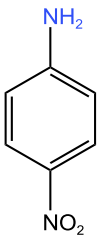
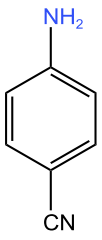
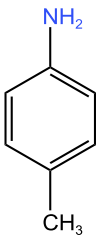


I II III IV V

4. Arrange these compounds in decreasing order of basic strength

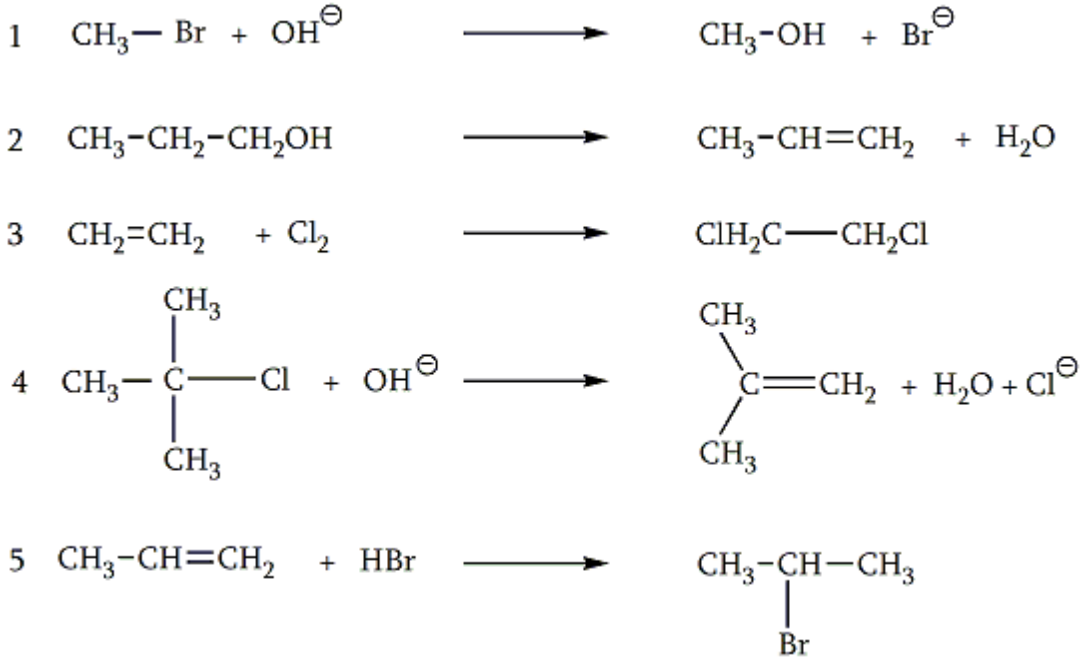
a) $CH_3CH_2NH_2$ b) NH_3 c) $ClCH_2CH_3NH_2$ d) $(CH_3CH_2)_2NH$

b)

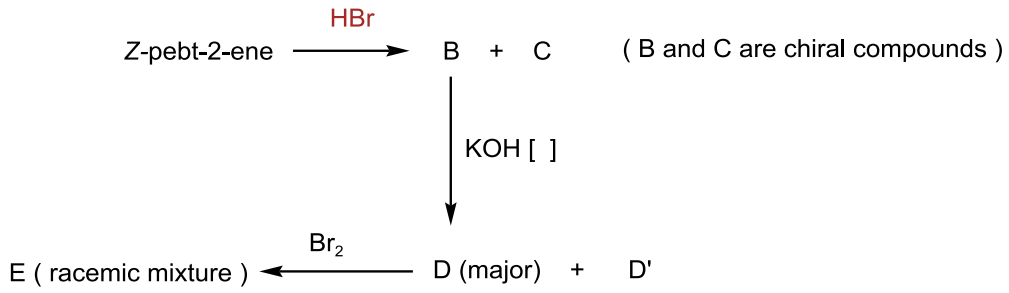
1)  2)  3)  4) 

Exercise 7 :

Indicate the type and mechanism of the reactions below :



Exercise 8 :



1. Give the plane developed formulas of A, B, C, D and E
2. Represent the two enantiomers of E according to the **wedge-dash** projection