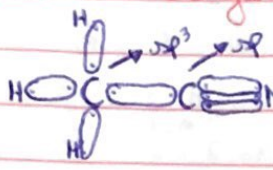
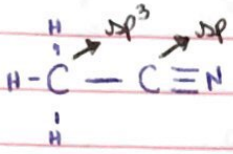
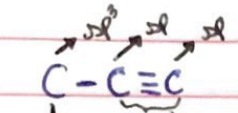
Lista I - Orgânica I

1- 

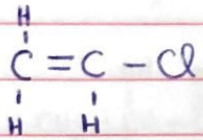
(A) 5 e^- no nível mais externo do N.

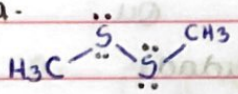
(B) 3 e^- ligantes e 2 e^- não ligantes

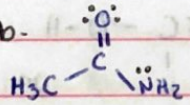
2- 

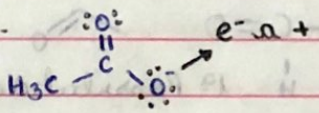
3- 

Tetraédrica (109,5°) → linear (180°)

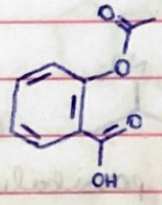
4- 

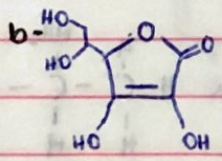
5- a- 

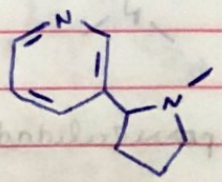
b- 

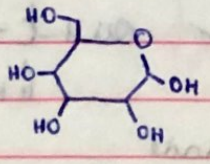
c- 

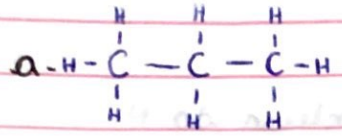
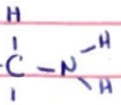
6-

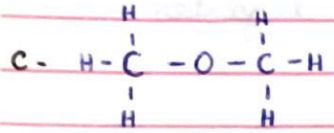
a- 

b- 

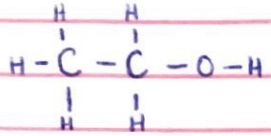
c- 

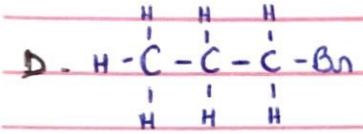
d- 

7. a.  b.  ou

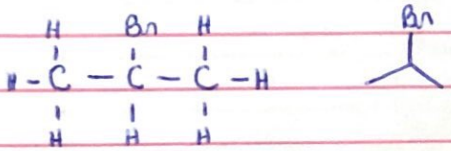
c.  1ª possibilidade

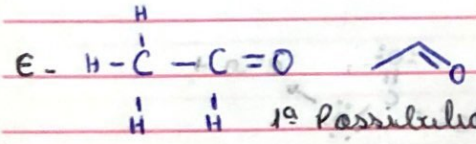
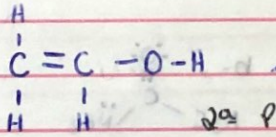
ou

 2ª Possibilidade

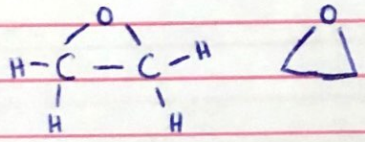
D.  1ª Possibilidade

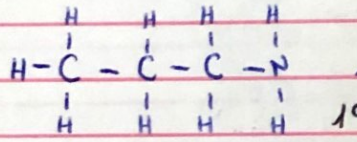
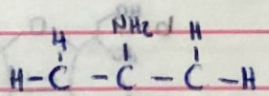
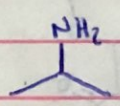
ou

 2ª Possibilidade.

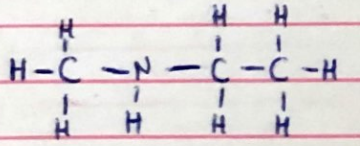
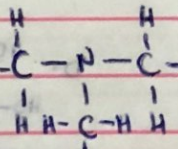
E.  ou  ou

1ª Possibilidade 2ª Possibilidade.

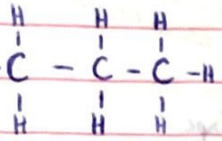
 3ª Possibilidade.

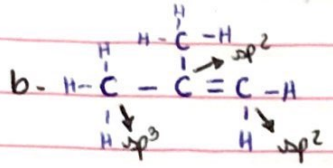
F.  ou  ou 

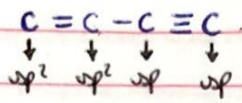
1ª possibilidade 2ª possibilidade

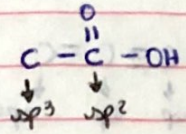
 ou 

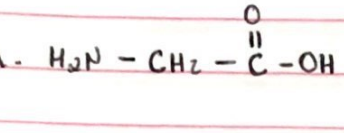
3ª possibilidade 4ª possibilidade.

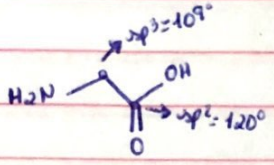
8- a-  sp^3 em todos!

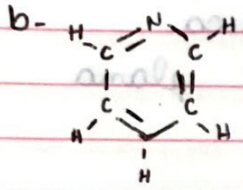
b- 

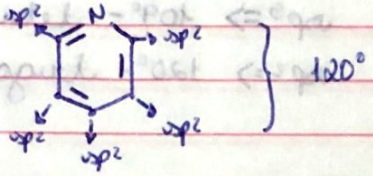
c- 

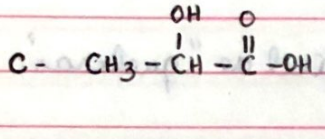
d- 

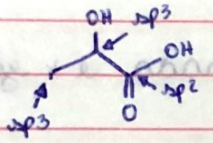
9- a- 



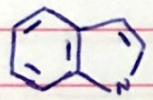
b- 



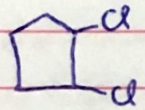
c- 



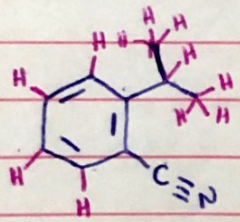
$sp^3 = 109°$ $sp^2 = 120°$.

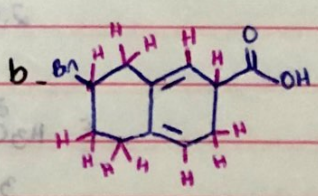
10- a. 

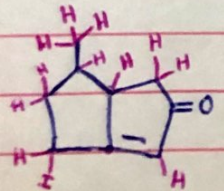
b- 

c- 

d- 

11- a-  $C_{10}H_{11}N$

b-  $C_{11}H_{13}O_2Br$

c-  $C_9H_{12}O$

12- a- $C - C = C - C$

$sp^3 \quad sp^2 \quad sp^2 \quad sp^3$

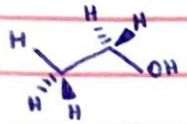
b- $C = C - C = C$ → aqui não tem dupla, se não, seria sp

$sp^2 \quad sp^2 \quad sp^2 \quad sp^2$

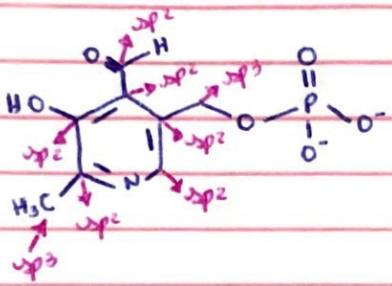
c- $C = C \equiv C = C$

$sp^2 \quad sp \quad sp \quad sp^2$

13-



14-

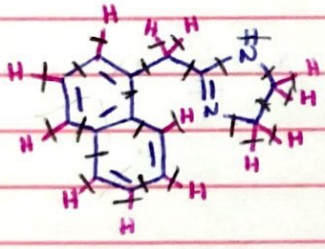


$sp^3 \Rightarrow 109°$ - tetraédrica

$sp^2 \Rightarrow 120°$ - trigonal plana

15- π, pois é a primeira a ser formada e + fácil de "quebrar".

16-



$C_{14}H_{14}N_2$

$\sigma = 32 = 26 + 1$ de cada dupla

$\pi = 6$

17-

a- $H_3C - Cl$ (δ+ em C, δ− em Cl)

2,5 3,1

b- $H_3C - NH_2$ (δ+ em C, δ− em N)

2,5 3

c- $H_2N - H$ (δ− em N, δ+ em H)

3 2,2

d- $H_3C - Li$ (δ− em C, δ+ em Li)

2,5 1

e- $H_3C - MgBr$ (δ− em C, δ+ em Mg)

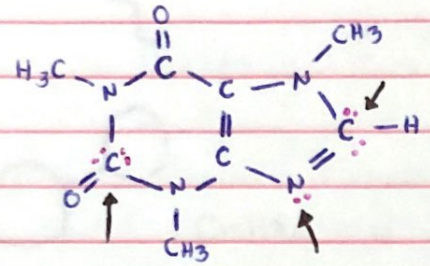
3 1,3

f- $H_3C - F$ (δ+ em C, δ− em F)

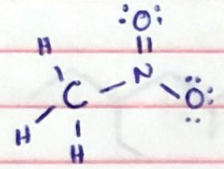
2,5 4

18- Isso ocorre, pois é uma molécula tanto polar, devido a diferença de eletronegativo, quanto apolar, pois os vetores se anulam devendo o momento de dipolo 0.

21.



22.



$CF_C = 4 - (0 + \frac{8}{2})$

$CF_C = 4 - 4 = 0$

$CF_N = 5 - (0 + \frac{8}{2})$

$CF_N = 5 - 4$

$CF_N = +1$

$CF_{O_1} = 6 - (6 + \frac{2}{2})$

$CF_{O_1} = 6 - 7$

$CF_{O_1} = -1$

$CF_{O_2} = 6 - (4 + \frac{4}{2})$

$CF_{O_2} = 6 - 6$

$CF_{O_2} = 0.$

19- Para Oxigênio:

e^- na camada de valência: 6

e^- de ligação: 2

e^- não ligantes: 6

$CF = 6 - (6 + \frac{2}{2})$

$CF = 6 - 7$

$CF = -1$

Para Enxofre.

e^- de valência: 6

e^- de ligação: 6

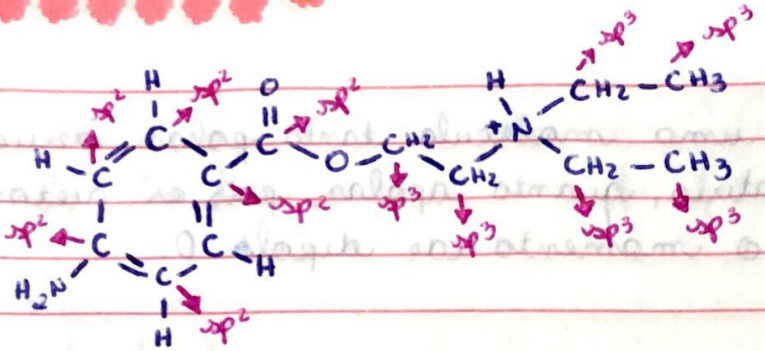
e^- não ligantes: 2

$CF = 6 - (2 + \frac{6}{2})$

$CF = 6 - 5$

$CF = +1$

20 - a -



b -