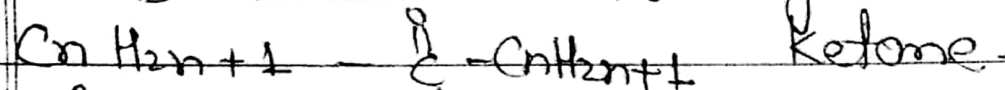
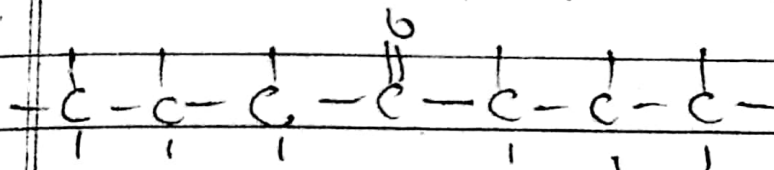
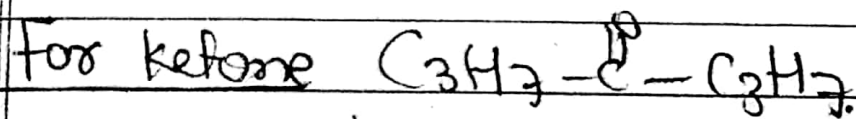
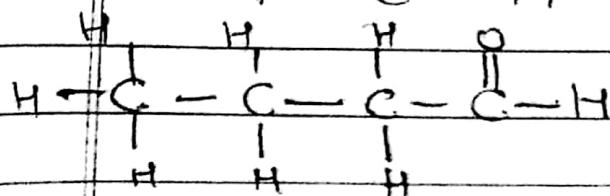
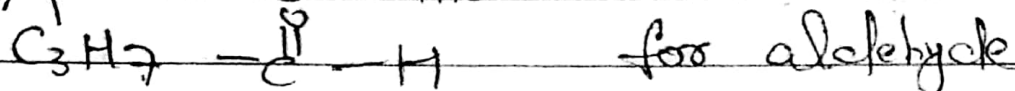


General formula

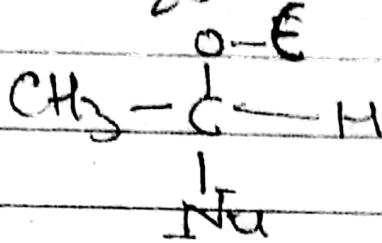
D1(S)



if $n=3$ then

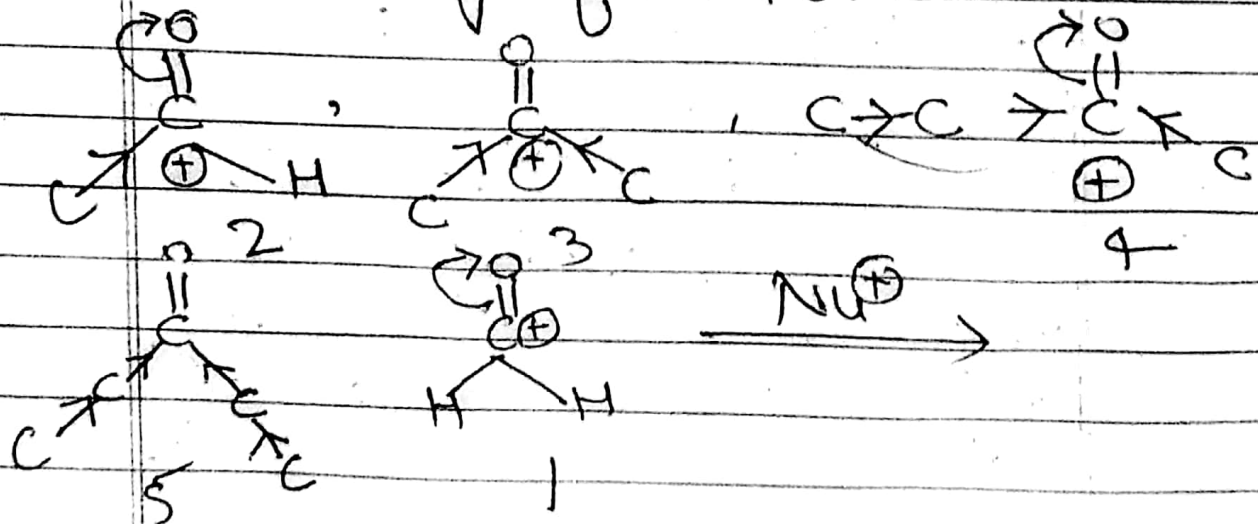


- Both are polar, due to different electronegativity value of carbon & oxygen atom. due to more electronegativity of O, it gain electron & show -ve charge. Hence electrophile attack here but due to less electronegativity of Carbon it loss & show +ve charge. hence nucleophile attack here.

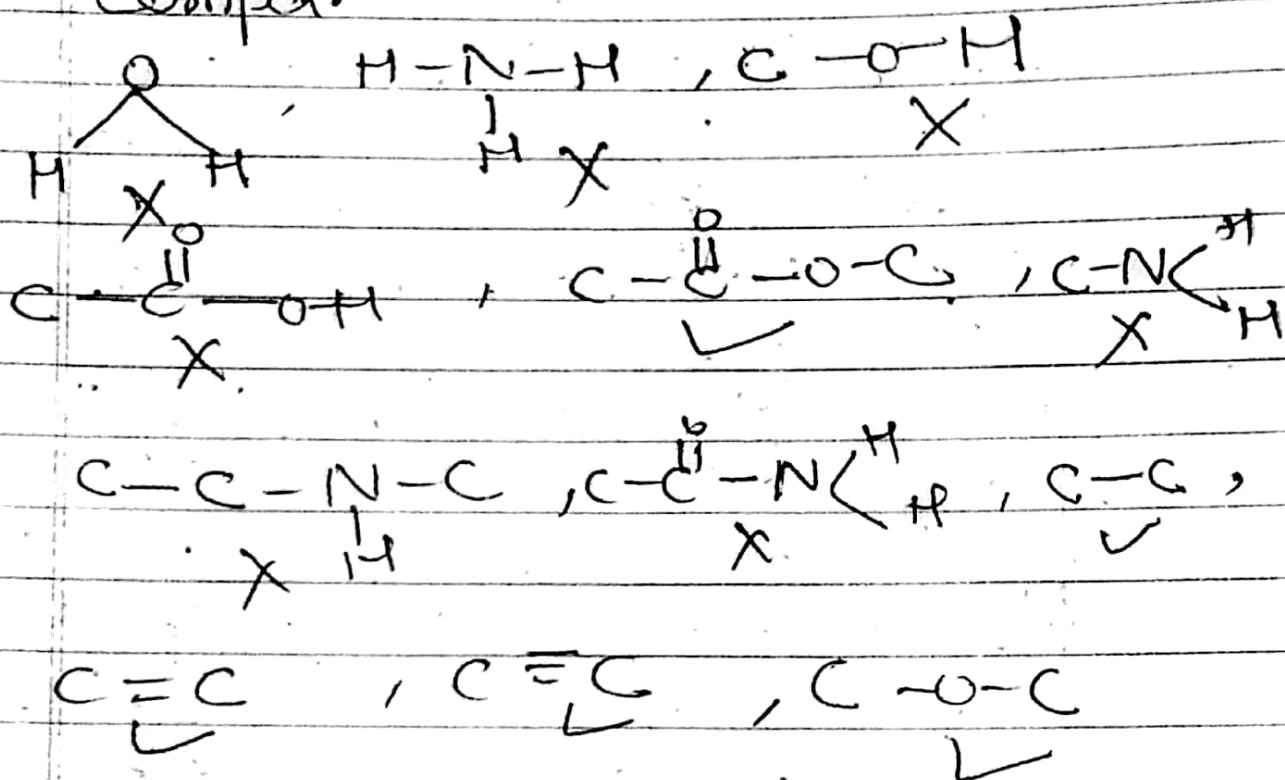


- hybridisation sp^2 , shape str. - trigonal planar.
bond angle 120° , bond length $\rightarrow 1.34 \text{ \AA}$

- additive σ_{alk}^+ because +ve inductive effect due to alkyl grp. decrease reactivity of ketone.



- aldehyde & ketone does not make hydrogen bond due to absence of $H-N$, $H-O$, $H-F$ single bond. hence soluble in non-hydrogen bonded compol. & insoluble in hydrogen bonded compol.



* Synthesis & preparatⁿ of aldehyde & ketone :-

- i) From alkene :- When alkene react with O_3 (ozonolysis) in presence of Zn , H_2O then form aldehyde & ketone depending on str. of alkene.

P-Block:- When last electron enters into a p-subshell & having general electronic configuration $ns^2 np^{1-6}$
i.e. $2e^-$ in last s-subshell &
1 to $6e^-$ in last p-subshell

eg:- $N_7 \rightarrow 1s^2 2s^2 2p^3$
 $Al_{13} \rightarrow 1s^2 2s^2 2p^6 3s^2 3p^1$

- P-block elements show variable oxidation no. & variable valency due to inert pair effect.
- Max^m oxidation no. for p-block = old grp.
- Min^m oxidation no. $\pm$ max^m oxidation no. - 8

$S \rightarrow \text{VIA}$

maxi O.N = +6

mini O.N = 6 - 8 = -2

Range of O.N = mini O.N to maxi O.N
= -2 to +6

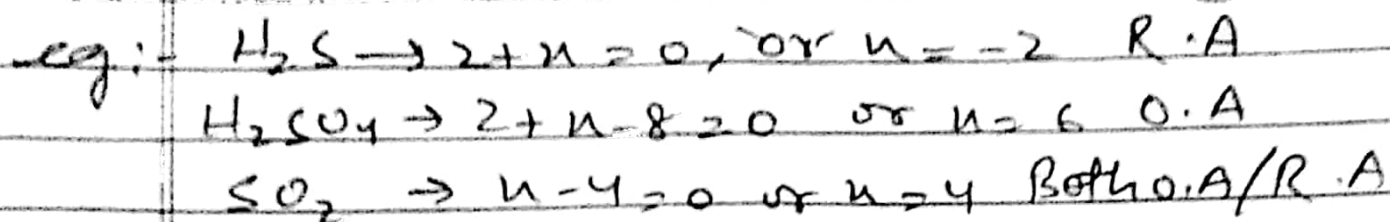
$= -2, -1, 0, 1, 2, 3, 4, 5, 6$

mini O.N

Both O.A & R.A

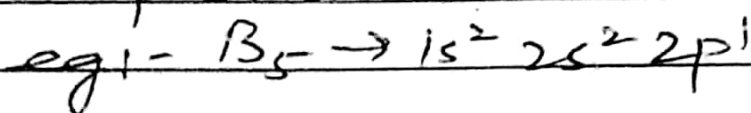
maxi O.N

M.H. Khan 11-5-2019 Mond, Maryam College
Topic - character of P-block $D_1(1)(1)$
Page No. _____

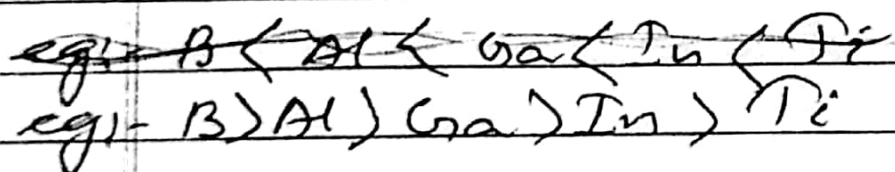


* Character of 13A or IIIA

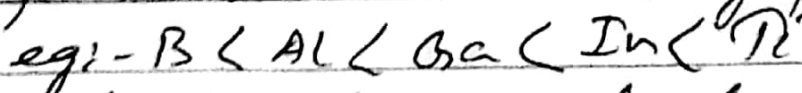
General electronic configuration
 $ns^2 np^1$ i.e. two electrons in
last s-subshell & 1 electron in
last p-subshell.



- Ionization energy, electronegativity,
electron affinity, electron gain
tendency, non-metallic nature
decrease from top to bottom.



Size, electro +ve nature, electron
lost tendency, metallic nature,
poisonous nature increase from
top to bottom in a grp.



- It shows valence electron & valency
3.

21/5/20

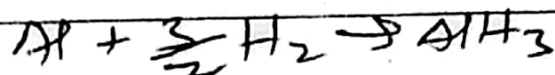
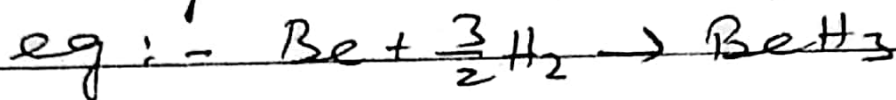
becz it belong III A grp.

- It show variable oxidⁿ no. due to inert pair effect. In III A metal, non-metal & metalloids are present.

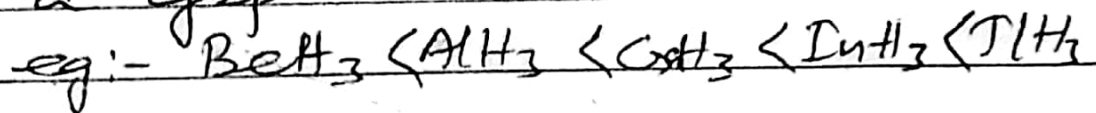
* Hydride of III A

When III A elements react with hydrogen then form MH_3 type of hydride A/o valency where $M = 3A$ elements.

eg:- B, Al, Ga, In, Tl



- Acidic nature, reducing agent nature increase from top to bottom in a grp.



- Basic nature, volatile nature, oxidising agent nature, bond angle decrease from top to bottom in a grp.

