



VSEPR - I and Doubt Clearing Session

Course on Chemical Bonding for Class XI 2023





sp



$$\frac{1}{2} \times 100 = 50\%$$

sp²



$$\frac{1}{3} \times 100 = 33.33$$

sp³



$$\frac{1}{4} \times 100 = 25$$



Question

from Raghav

Sir Mene VJ 2.0 ka chitra banaya hai :)

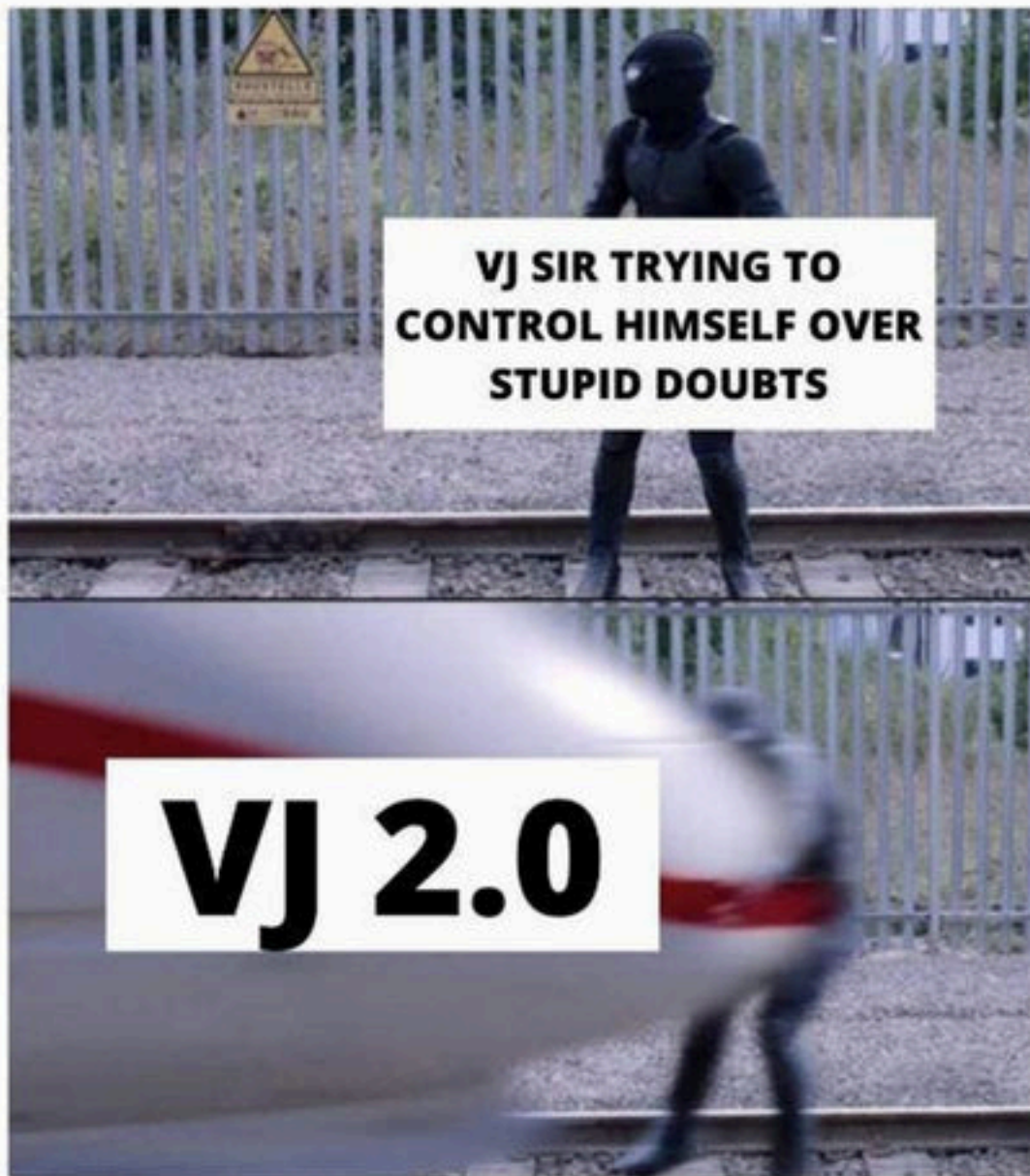


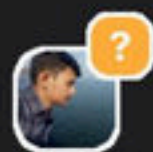


Question

from SAYAK

Sorry sir, it is just for fun. I am a big fan of VJ 2.0





Question

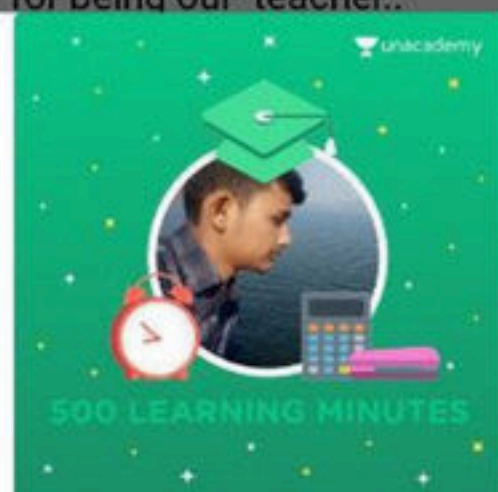
from Sameer



Vishal Joshi ✓

17.7k Followers

Thank you for being our teacher..

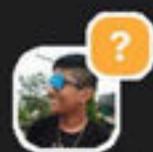


Dedicated to Vishal Joshi

Thank you for being our teacher..

Share with friends:



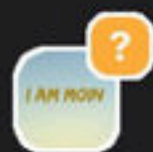


Question

from dwarkadhis...

SIR DONT BE OFFENDEDJUST FOR FUN





Question

from MOIN SHAIK...

Just for Fun mujhe Google par mila

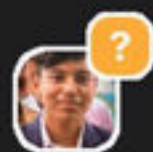




Question

from Aditya

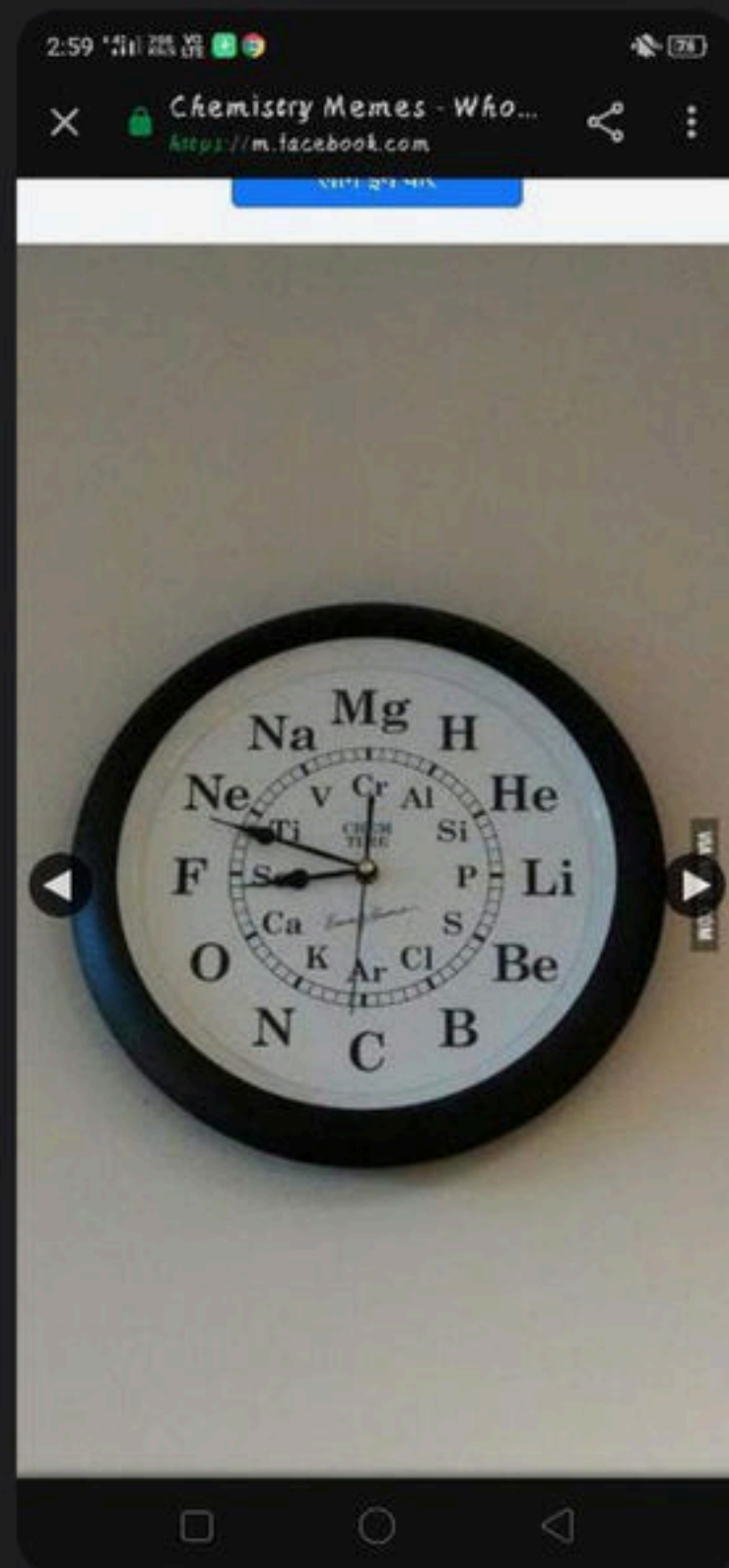




Question

from RAKSHIT

Xdd



Sp



$$\frac{1}{2} \times 100 = 50\%$$

Sp²



$$\frac{1}{3} \times 100 = 33.33\%$$

Sp³



$$\frac{1}{4} \times 100 = 25\%$$



s % ↑ with ↑

distance from nucleus

sp < sp² < sp³



order of
energy of hybrid
orbital

$$sp < sp^2 < sp^3$$

Note all hybrid orbitals have same shape
but diff size

T | F

sp



50%

Size of hybrid orbital $\propto \frac{1}{\uparrow \text{S. \% character}}$

sp^2



33.33

S. % \uparrow att \uparrow Size \downarrow

sp^3



25

order size

$sp < sp^2 < sp^3$

$$\begin{array}{l} \text{T.H.O} \\ \text{(total hybrid orbitals)} \end{array} = \begin{array}{l} \text{number} \\ \text{of } \sigma \text{ bonds} \end{array} + \begin{array}{l} \text{number} \\ \text{of l.p} \end{array}$$

total number
of val. e^-

2	3	4	5	6	7	8
Be	B	C	N	O	F	Ne
				S		

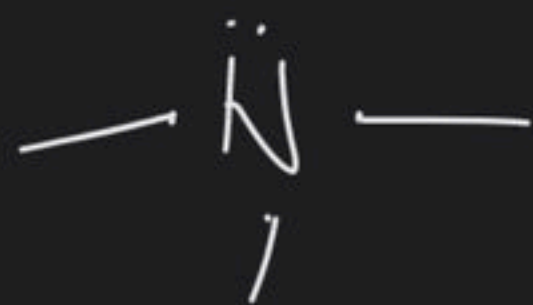
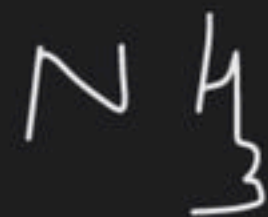


$$3 + 1 = 4$$

sp^3



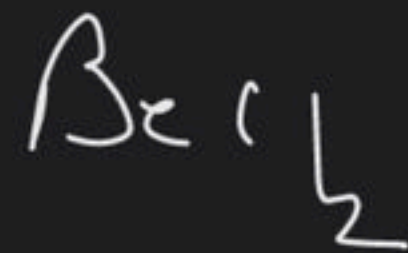
$$\left\{ \begin{array}{lcl} \text{t.o.} & = & 2 \quad sp \\ & = & 3 \quad sp^2 \\ & & 4 \quad sp^3 \\ & & 5 \quad sp^3d \\ & & 6 \quad sp^3d^2 \\ & & 7 \quad sp^3d^3 \end{array} \right.$$



$$\begin{array}{c} 3 + 1 = 4 \\ \text{sp}^3 \end{array}$$



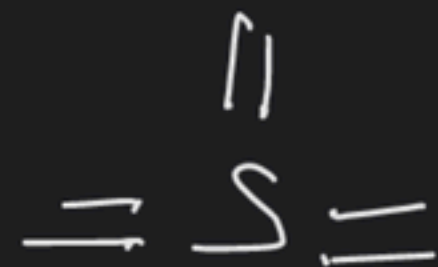
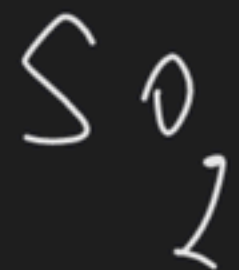
$$\begin{array}{c} 4 + 0 = 4 \\ \text{sp} \end{array}$$



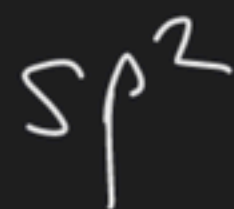
$$2 + 0 = 2 \text{ sp}$$



$$\begin{array}{c} 4 + 0 = 4 \\ \text{sp} \\ \text{---} \end{array}$$

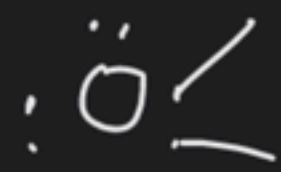
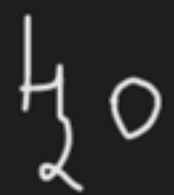
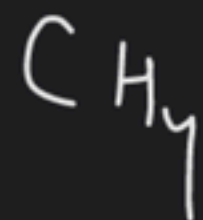


$$2 + 1 = 3$$



$$3 + 0 = 3$$





$$2 + 2 = 4$$

$$sp^3$$

$$4 + 0 = 4$$

$$sp^3$$

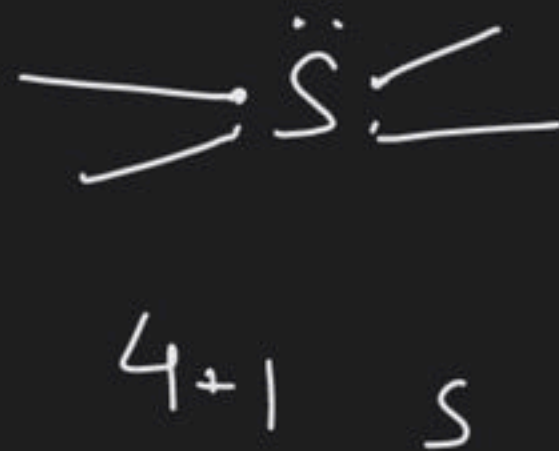
P_{15}



$$5 + 0 = 5$$

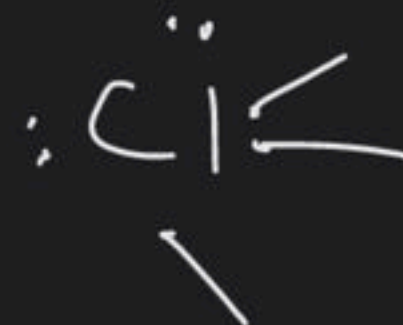
sp^3d

SF_4



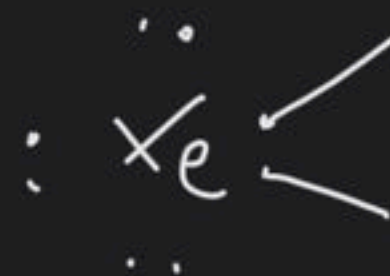
sp^3d

ClF_3



sp^3d

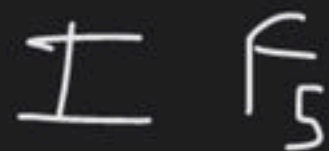
XeF_2



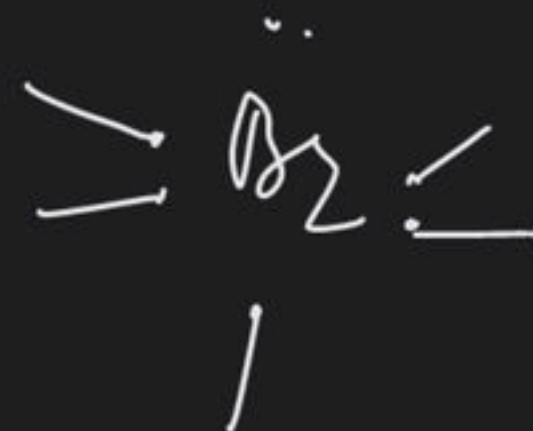
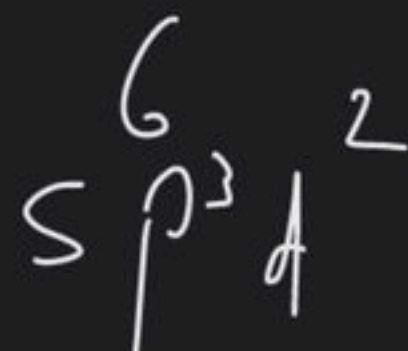
sp^3d



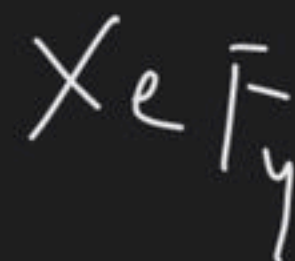
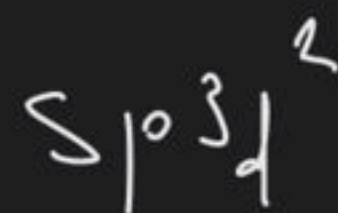
$$6 + 0 = 6$$



$$5 + 1$$



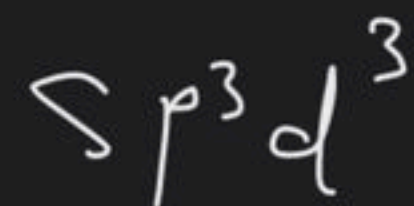
$$5 + 1 = 6$$



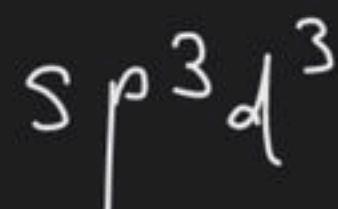
$$4 + 2 = \text{sp}^3\text{d}^2$$

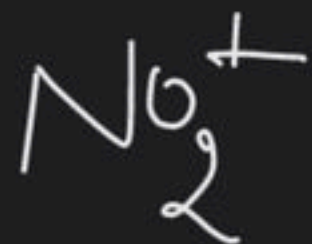


$$7 + 0 = 7$$



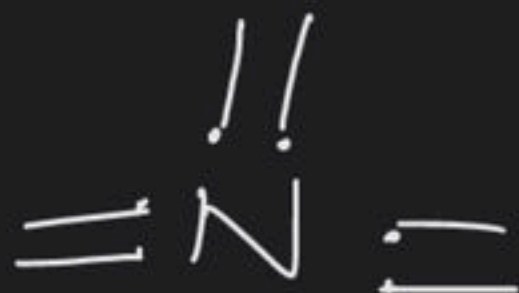
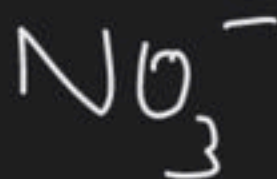
$$6 + 1 = 7$$





$$2 + 0 = 2$$

sp



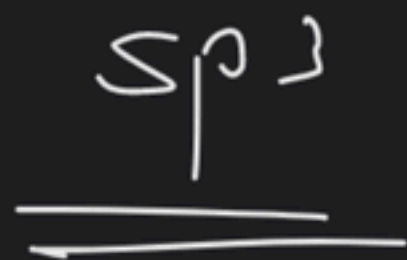
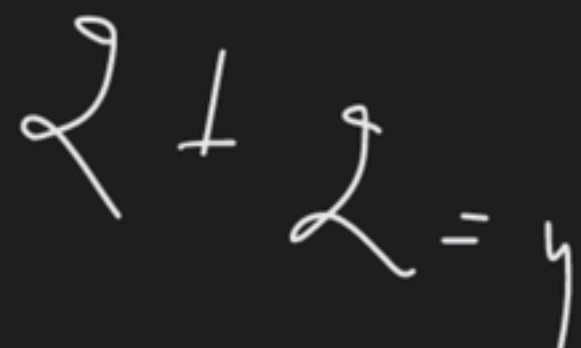
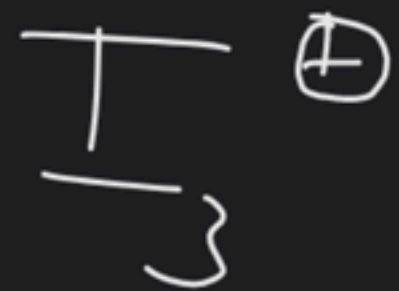
$$3 + 0 = 3$$

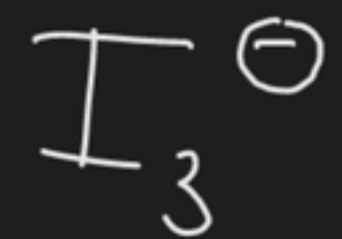
sp²



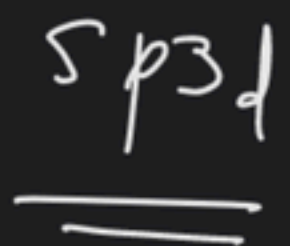
$$2 + 2 = 4$$

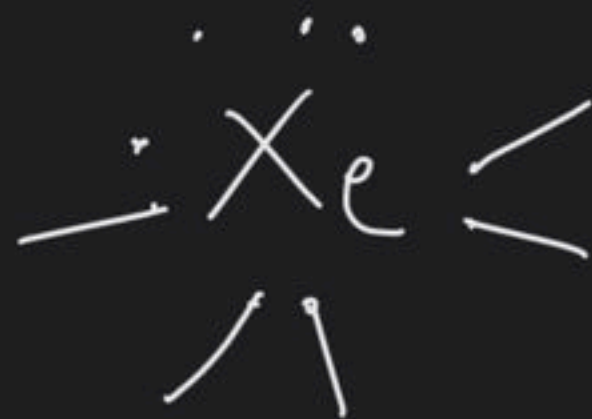
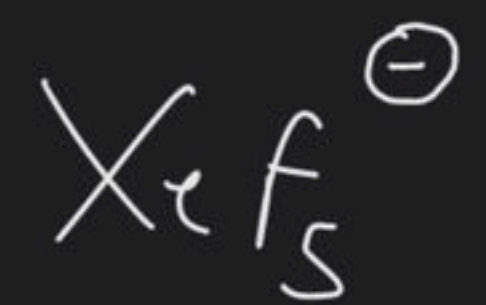
sp³



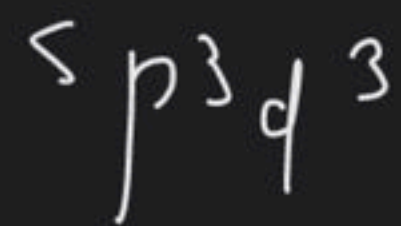


$$2 + 3 = 5$$

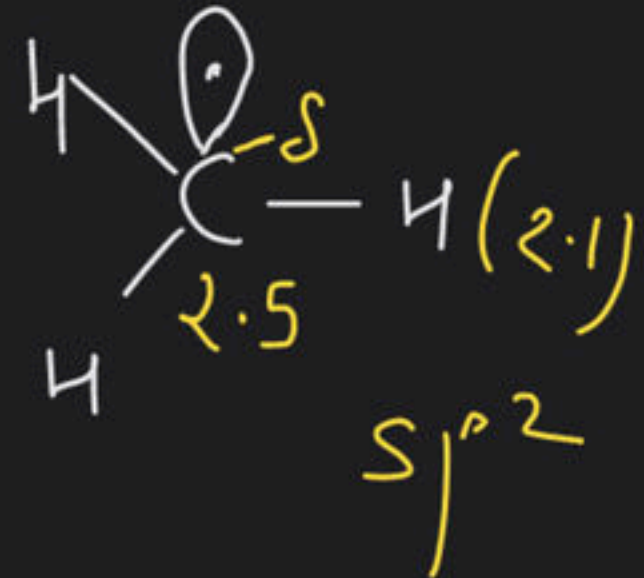
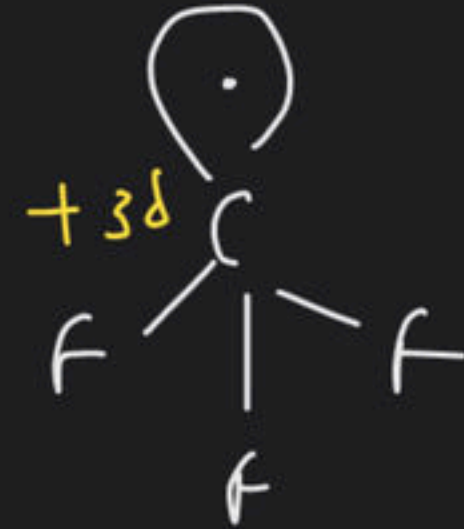
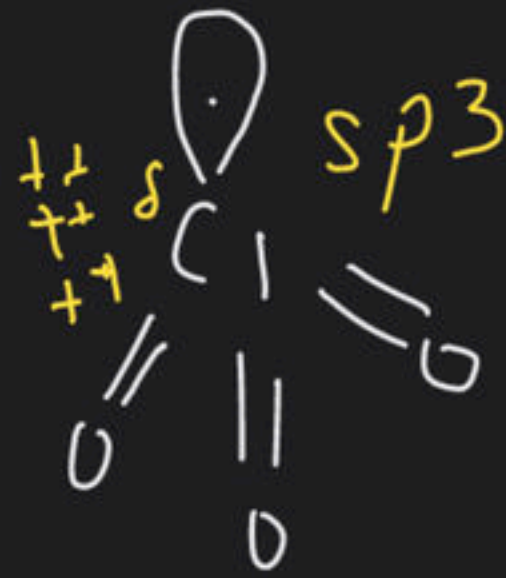
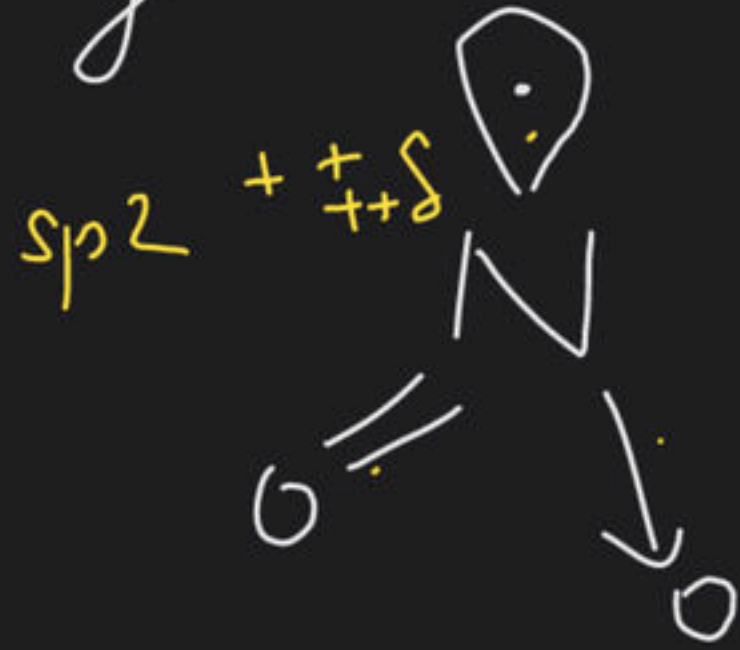




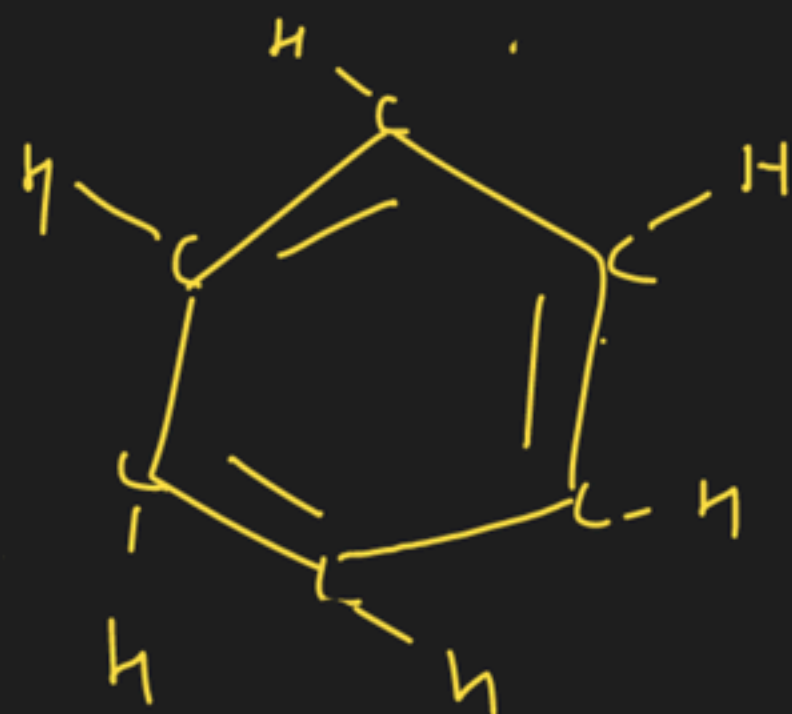
$$5 + 2 = 7$$



hyb. of odd-electron molecules \rightarrow



Orbital having odd e^- present at high energy level so it does not involve in hybridisation but if E.N of S.A is higher than C.A so it developed partial positive charge on C.A so orbital contracts towards C.A and involve in hybridisation.



sp^2

benzene

all atoms have sp^2 hyb. in benzene
T | F

∴ As False [because it does not have sp^2]

all Carbon atoms have sp^2 hyb.
True

$$\left\{ \begin{array}{l} \underline{90} \\ 8 \end{array} \right.$$

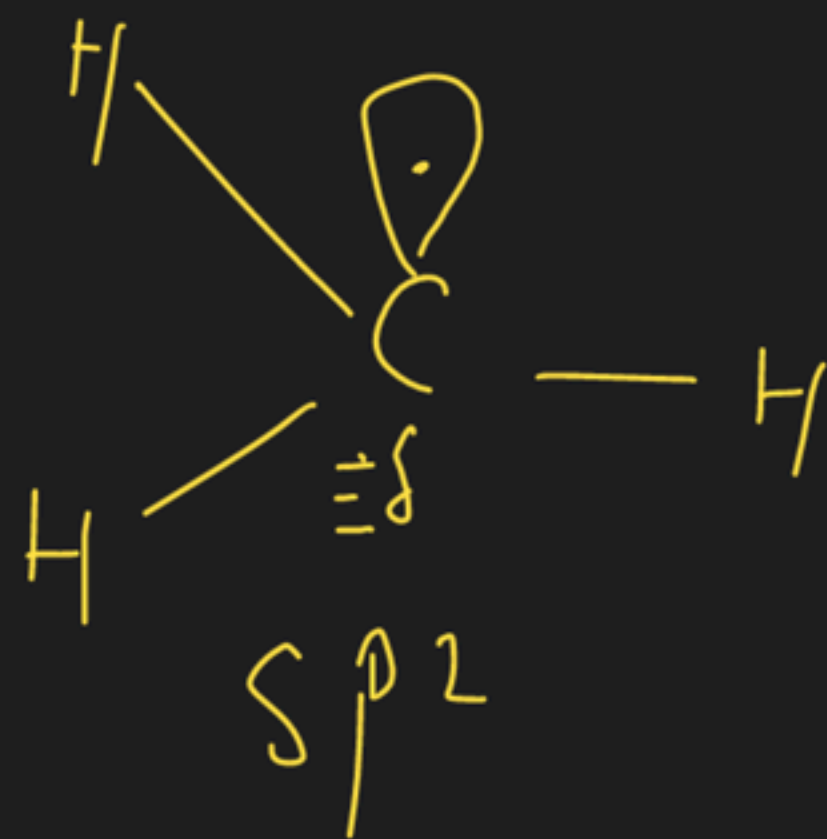
$$\frac{120}{\underline{\text{size}}}$$

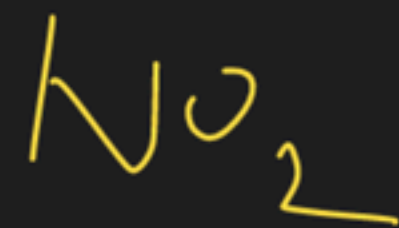
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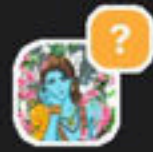
$$\frac{\underline{90}}{120'}$$

(8)

(1)







Question

from Rudra Prat...


Ye dekhiye sir 2.0 ne apna naya course launch kr liya




BHOJPURI

Course on Dabbangiri By VJ 2.0(Your Most Wanted Bhai) VJ 2.0

Hello this is VJ 2.0 and in this course I am going to teach you how to do dabangiri in class Finally course mmil hi gaya

 Updates

 About