

B. M. A. College BAHARI

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Xenon oxydifluoride :: Molecular formula

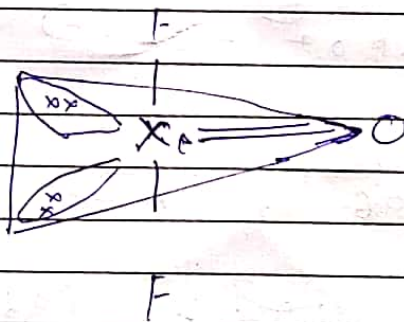
of Xenon-oxy difluoride is XeOF<sub>2</sub>

Central atom Xe of this molecule

is sp<sup>3</sup> hybridised. The structure

of the molecule is TRIGONAL BIPYRAMIDAL

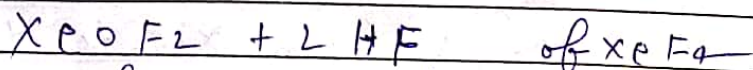
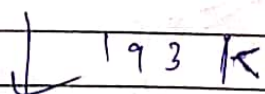
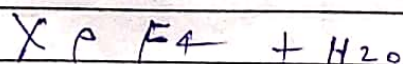
structure is represented as.



Shape of

the molecule  
is T-shaped

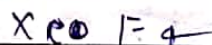
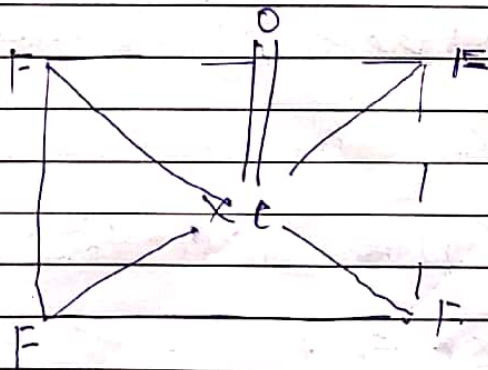
Xenon oxydifluoride is prepared by  
the partial hydrolysis of XeF<sub>4</sub> at  
low temp.



Not all the fluorine atoms are replaced

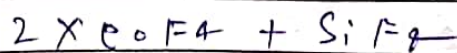
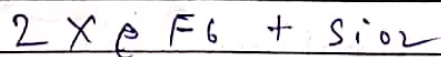
only partial fluorine atoms are replaced that is why it is called partial hydrolysis.

Xenon oxy tetra fluoride: Molecular formula of xenon oxy tetra fluoride is  $\text{XeOF}_4$ . Its central atom is Xe which is  $sp^3d^2$  hybridised. Structure of the molecule is square pyramidal represented as

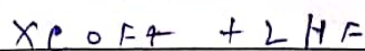
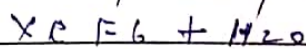


Preparation.

(i) Reaction of  $\text{SiO}_2$  with Xenon Hexa fluoride produces  $\text{XeOF}_4$



(ii) Partial hydrolysis of  $\text{SF}_6$  gives  $\text{XeOF}_4$



Prop.  $\text{XeOF}_4$  on reaction with  $\text{SiO}_2$  gives  $\text{XeO}_3$   $\text{XeOF}_4 + \text{SiO}_2 \rightarrow \text{SiF}_4 + \text{XeO}_3$