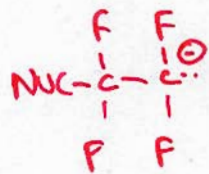
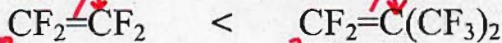


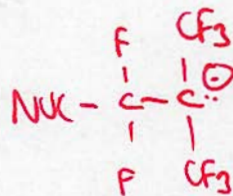
8-13) Explain why PFIB is more reactive towards nucleophiles than TFE.

(TFE) less reactive ----- (PFIB) more reactive



The reactivity is related to the stability of the intermediate anion produced.

Less stable anion
(2 β Fluorines & 2 α Fluorines)

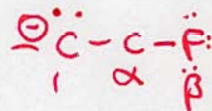


More stable anion.
(8 β Fluorines)

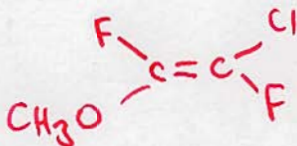
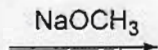
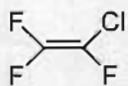
Fluorines that are directly attached to a carbanionic centre are destabilizing. These " α Fluorines" have e^-/e^- repulsions which are worse than their beneficial σ withdrawal



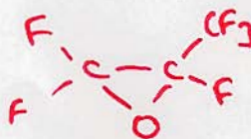
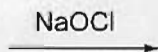
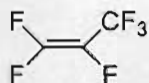
Fluorines that are two bonds away from a carbanionic centre are stabilizing. These " β Fluorines" are strongly electron withdrawing.



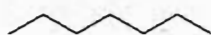
14-15) Draw the products.



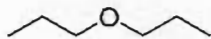
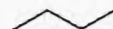
& E Isomer



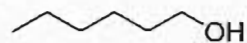
16-18) Circle the correct answer:



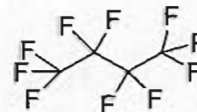
...has a boiling point that is
LOWER / **HIGHER** / SIMILAR to...
THAN



...has a boiling point that is
LOWER / HIGHER / SIMILAR to...
THAN

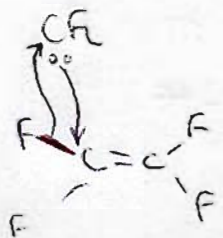
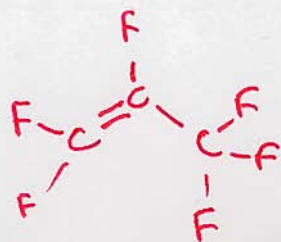
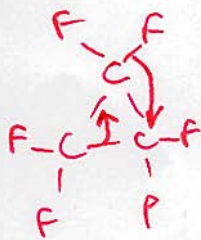
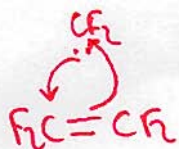


...has a boiling point that is
LOWER / HIGHER / **SIMILAR** to...



19-20) Write a mechanism for the reaction of difluorocarbene with $\text{CF}_2=\text{CF}_2$ to give $\text{CF}_2=\text{CFCF}_3$

One of....



Insertion
into CF bond

