

**Marks**  
**6**

- Calculate the pH of a  $0.10 \text{ mol L}^{-1}$  solution of HF. (The  $pK_a$  of HF is 3.17.)

Answer:

What mass of NaF needs to be added to 100.0 mL of the above solution to make a buffer with a pH of 3.00?

Answer:

Explain why HCl is a much stronger acid than HF.