

- Explain why HOCl is a stronger Brønsted acid than HOBr but HCl is a weaker acid than HBr.

**Marks**  
**2**

- $\text{BF}_3$  is a Lewis acid in its reaction with diethyl ether. Explain what is meant by a Lewis acid and draw the product of this reaction.

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**Marks**  
**5**

- Often pH is used to characterise acidic solutions. Give a brief definition of pH.

Describe the difference between a strong acid and a weak acid.

In general, can pH be used to define the strength of an acid? Explain your answer.

**THE REMAINDER OF THIS PAGE IS FOR ROUGH WORKING ONLY.**

- Describe the difference between a strong and a weak acid.

Describe in qualitative terms how the percentage ionisation of a weak acid changes when an aqueous solution thereof is diluted.

Which chemical principle can be used to explain the change in percentage ionisation of a weak acid on dilution and how?