

## 20 Acids, bases, and pH

Specification reference	Checklist questions	
5.1.3 a i	Can you describe a Brønsted–Lowry acid as a species that donates a proton and a Brønsted–Lowry base as a species that accepts a proton?	<input type="checkbox"/>
5.1.3 a ii	Can you use the term <i>conjugate acid–base pairs</i> ?	<input type="checkbox"/>
5.1.3 a iii	Can you describe monobasic, dibasic, and tribasic acids?	<input type="checkbox"/>
5.1.3 b ii	Can you describe the role of H <sup>+</sup> in the reactions of acids with metals and bases (including carbonates, metal oxides and alkalis), using ionic equations?	<input type="checkbox"/>
5.1.3 c i	Can you describe the acid dissociation constant, $K_a$ , for the extent of acid dissociation?	<input type="checkbox"/>
5.1.3 c ii	Can you describe the relationship between $K_a$ and $pK_a$ ?	<input type="checkbox"/>
5.1.3 d	Can you use the expression for pH as: $pH = -\log[H^+]$ $[H^+] = 10^{-pH}$	<input type="checkbox"/>
5.1.3 e	Can you use the expression for the ionic product of water, $K_w$ ?	<input type="checkbox"/>
5.1.3 f i	Can you calculate pH for strong monobasic acids?	<input type="checkbox"/>
5.1.3 f ii	Can you calculate pH for strong bases using $K_w$ ?	<input type="checkbox"/>
5.1.3 g	Can you calculate pH, $K_a$ or related quantities, for a weak monobasic acid using approximations	<input type="checkbox"/>

Specification reference	Checklist questions	
5.1.3 h	Can you describe the limitations of using approximations to $K_a$ related calculations for 'stronger' weak acids?	<input type="checkbox"/>