

5. Which of the following statements about pure water are correct?

- (i) Pure water is a weak electrolyte that undergoes self-ionisation.
- (ii) The equilibrium constant for the ionisation of pure water at 25 °C is 1.00×10^{-14} .
- (iii) Pure water ionises completely at 25 °C, hence $[H^+] = [OH^-]$.
- (iv) The ionisation of pure water produces twice as many hydrogen ions as hydroxide ions.

- (a) i and ii only
- (b) ii and iii only
- (c) iii and iv only
- (d) i, ii, iii and iv