

8. Which of the following equation/s demonstrate/s the Arrhenius model of acids and bases?

- (i) $\text{HCl}(\text{aq}) \rightarrow \text{H}^+(\text{aq}) + \text{Cl}^-(\text{aq})$
- (ii) $\text{CH}_3\text{COOH}(\text{aq}) + \text{H}_2\text{O}(\text{l}) \rightarrow \text{CH}_3\text{COO}^-(\text{aq}) + \text{H}_3\text{O}^+(\text{aq})$
- (iii) $\text{KOH}(\text{aq}) \rightarrow \text{K}^+(\text{aq}) + \text{OH}^-(\text{aq})$
- (iv) $\text{H}_2\text{PO}_3^-(\text{aq}) + \text{H}_3\text{O}^+(\text{aq}) \rightarrow \text{H}_2\text{O}(\text{l}) + \text{H}_3\text{PO}_4(\text{aq})$

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