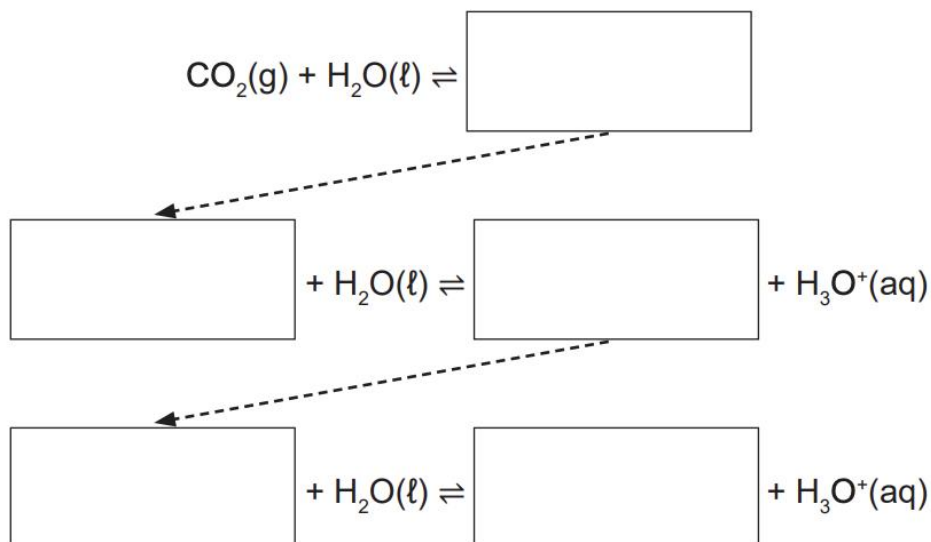


**Question 31****(9 marks)**

The amount of carbon dioxide in the Earth's atmosphere is increasing, leading to more carbon dioxide dissolving in the oceans and hence ocean acidification.

- (a) Complete the following sequence of equations to show what happens to carbon dioxide when it dissolves in water. (3 marks)



- (b) Other than death, state **two** consequences of the above sequence of equations on marine organisms with shells. (2 marks)

One: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Two: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- (c) Use Le Châtelier's Principle and the sequence of equations in part (a) to predict what might happen, in relation to ocean acidification, if the United Nations Kyoto Protocol is discarded. Explain your reasoning. (4 marks)

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