

Question 28**(8 marks)**

An example of a galvanic cell is the molten carbonate fuel cell, represented in the diagram below. As this cell operates, hydrogen gas is reacted with the carbonate ion at the anode, while oxygen gas reacts with carbon dioxide gas at the cathode. The carbon dioxide gas is re-used.

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- (a) Write the half-equation to show the reaction at the electrode at which oxidation occurs. (3 marks)

(b) Write the overall equation for the current-producing reaction.

(3 marks)

- (c) State **two** reasons why this fuel cell is a more environmentally-friendly alternative to the internal combustion engine. (2 marks)

One: _____

Two: _____
