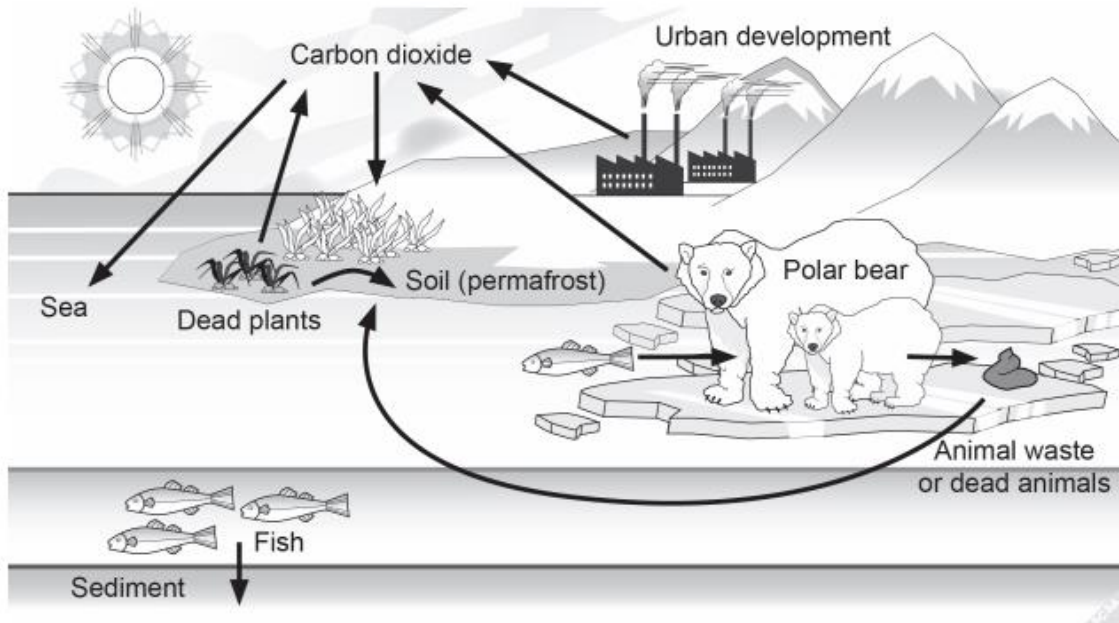


## Question 2

(20 marks)

Many biogeochemical cycles are currently being studied as climate change and human impacts are drastically changing the speed, intensity and balance of these cycles.

Look at the diagram below which represents the carbon cycle in the Arctic region.



(a) Use the diagram to explain how the element carbon is recycled.

(4 marks)

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**Question 2** (continued)

- (b) Explain why the carbon cycle is considered a biogeochemical cycle. (3 marks)

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- (d) With climate change Arctic sea ice has declined (melting into the ocean) and carbon dioxide levels have increased. Explain how the changes to these two abiotic factors affect the survival of coldwater fish that live in the Arctic region. (4 marks)

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