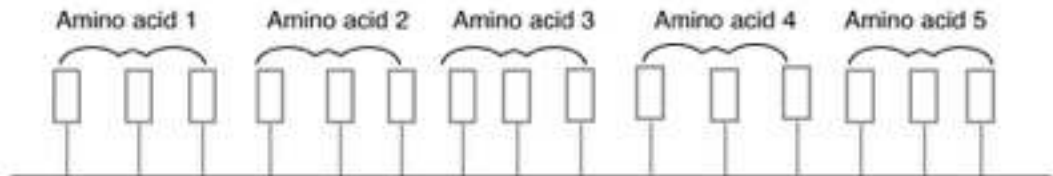


0 1

A molecule of DNA contains four different bases.

The four bases are arranged in a long chain. The chain of bases controls the synthesis of a protein.

For example, the chain of bases could make a protein that determines eye colour. The diagram below shows some bases along a strand of DNA.



0 1

1

What word is used to describe 'a small section of a DNA molecule that controls the synthesis of a protein'?

[1 mark]

0 1

2

In a cell, where are proteins synthesised?

[1 mark]

0 1

3

Describe how proteins are synthesised from a chain of bases in DNA. Use the diagram to help you answer this question.

[3 marks]

0 1

4

Mistakes sometimes occur when DNA molecules are copied during cell division.

Suppose that one of the bases, base **A**, was substituted by a **C** base.

What might be the effect of this change in structure of the protein?

[1 mark]
