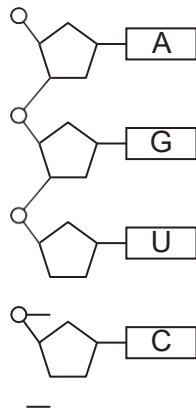


GCSE Biology B (Twenty First Century Science)
J257/03 Breadth in Biology (Higher)

Question Set 30

- 1 (a) In protein synthesis a section of one strand of DNA is copied and a molecule of mRNA is formed.

The diagram shows a molecule of mRNA.



Compare the structure of mRNA to the structure of DNA.

[2]

mRNA is single stranded whilst DNA is double stranded.
mRNA contains U base instead of T base (which is present in DNA)

- (b) Genetic variants can be found in both coding and non-coding DNA.

Complete the sentences to describe the effect of genetic variants in non-coding DNA.

Use words from the list.

You can use each word once, more than once, or not at all.

base DNA gene genotype
mutation phenotype sugar protein

Some sections of DNA do not code for a protein

Non-coding DNA controls whether a particular gene is expressed.

If there is a mutation in the non-coding DNA, particular proteins will not be made.

The absence of particular proteins could alter the ... phenotype ... of the individual.

[3]

Total Marks for Question Set 30: 5

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