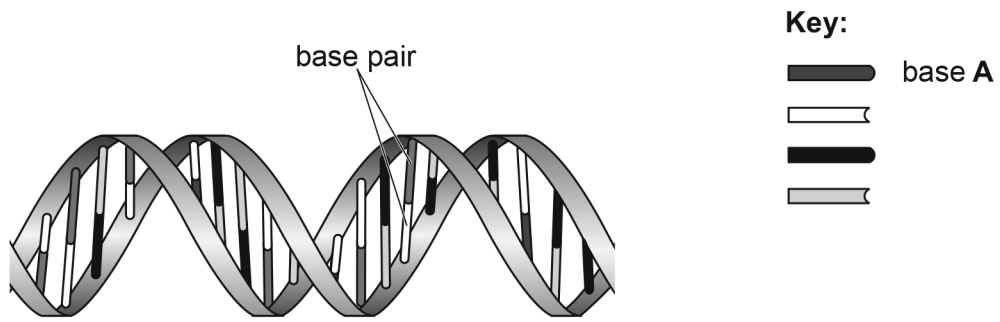


1 The diagram is of DNA.



(a) (i) State the letter of the base that pairs with A.

..... [1]

(ii) State the letters of the other bases in DNA.

..... [1]

[Total: 2]

2 The table shows some of the nutrients found in human milk, the elements that make up the nutrients, the enzymes that digest them and the products of digestion.

Complete the table.

nutrient	elements	enzyme	products of digestion
protein			
fat			
lactose (milk sugar)	C, H, O		galactose and glucose (simple sugars)

[4]

[Total: 4]

3 Protein can be broken down into amino acids.

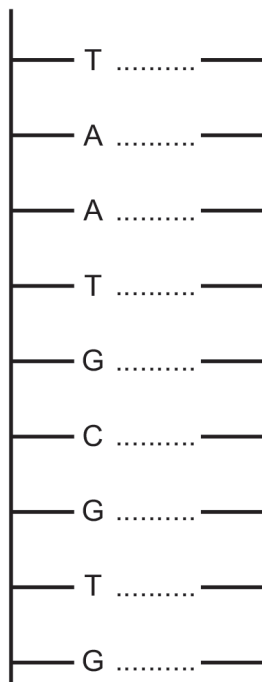
List **four** chemical elements that are always found in protein.

- 1
- 2
- 3
- 4 [2]

[Total: 2]

4 The diagram shows part of a DNA molecule from a chromosome of a cat.

Complete the diagram by writing the letters for the base sequence of the other strand of the DNA molecule.



[1]

[Total: 1]

5 Proteins are large molecules.

The boxes on the left show the names of some large molecules.

The boxes on the right show the smaller molecules they are made from.

Draw **four** lines to match the large molecule with the smaller molecule it is made from.

large molecule

smaller molecule

cellulose

fat

glycogen and starch

protein

amino acids

fatty acids and glycerol

glucose

[4]

[Total: 4]

6 Phloem is used to transport sucrose and amino acids in plants. Sucrose is a carbohydrate.

Describe the uses of carbohydrates **and** amino acids in plants.

.....

.....

.....

.....

.....

.....

.....

[4]

[Total: 4]

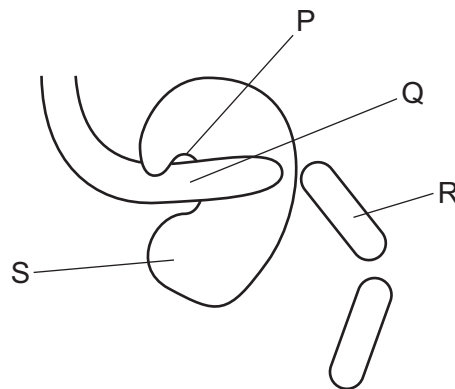
7 Enzymes are proteins.

State the chemical elements that enzymes are made from.

..... [2]

[Total: 2]

8 The diagram shows a protease molecule catalysing the break down of a protein molecule.



What are the parts labelled P, Q, R and S?

	enzyme	product	substrate	active site
A	P	Q	R	S
B	R	S	P	Q
C	S	P	Q	R
D	S	R	Q	P

[1]

[Total: 1]