

- 11** In some people a mutation can affect the beta chains in their haemoglobin molecules. As a result polar amino acids on the outer surfaces of the chains are replaced by non-polar amino acids.

What will be the effect on haemoglobin?

- A** Haemoglobin will become less soluble.
- B** Haemoglobin will become more soluble.
- C** Hydrophobic interactions between amino acids will decrease.
- D** More hydrogen bonds will form in the molecule.

- 10** Which bonds between amino acids hold the shape of the secondary structure and also the tertiary structure of proteins?

- A** peptide bonds
- B** disulfide bonds
- C** hydrogen bonds
- D** ionic bonds

- 11** Resilin is a protein found in the wings of insects. It is an elastic, fibrous protein and scientists have suggested that it may have an important role in allowing the wings of an insect to fold and unfold without damage.

Peptidyl transferase is an enzyme which catalyses the condensation of amino acids during translation to form resilin.

Which statements are correct?

- 1 Peptidyl transferase and resilin have structural roles in the insect.
- 2 Peptidyl transferase is a globular protein.
- 3 Peptidyl transferase is soluble in water.

- A** 1 and 2 **B** 1 and 3 **C** 1 only **D** 2 and 3