PROTEINS: AS ENZYMES

I am just going to ask questions about enzymes in general terms, and not about the specific enzymes discussed on the Chemguide page as examples. Find out exactly what your examiners are likely to ask you, and then practise their questions.

1. The way an enzyme interacts with its substrate is described in terms of an *active site* and a *lock-and-key* mechanism.

   a) What is an active site?

   b) Explain how a substrate/reactant (the "key") binds with the active site (the "lock") in terms of

      (i) its shape;

      (ii) the chemical groups that it contains.

   c) Enzymes are very *specific*. Explain what this means and why it results from what you have said in part (b).

   d) The interaction between a substrate and an enzyme is often shown as

   

   Explain what this means.

2. Enzymes have *cofactors* which may be *prosthetic groups* or *coenzymes*.

   a) In general terms, what is a cofactor.

   b) Explain the difference between a prosthetic group and a coenzyme.