**3.61ThT**

**Knowledge Audit is in black ink. Helpful advice is in red italics underneath.**

Define enzyme and active site.

**3.6.2** Explain enzyme–substrate specificity.

**3.6.3** Explain the effects of temperature, pH and substrate

concentration on enzyme activity.

*[ You should be able to draw enzyme activity graphs for each of these and be able to explain them]*

**3.6.4** Define denaturation.

[*You should be able to describe what happens to the specific bonding of the protein when this happens]*

**3.6.5** Explain the use of lactase in the production of lactose-free

milk.

[ *You should be able to explain how large scale amounts of lactase is obtained, why lactase packed beads are put in a column, how this creates lactase free milk and what products are used commercially]*

State that metabolic pathways consist of chains and cycles

of enzyme catalysed reactions.

**7.6.2** Describe the induced-fit model.

[*You should be able to name the three bond types that would be broken during enzyme catalyzed hydrolysis and why the products do not stay bound to the enzyme]*

**7.6.3** Explain that enzymes lower the activation energy of the

chemical reactions that they catalyse.

[*The associated graph is not required to be annotated yet]*

**7.6.4** Explain the difference between competitive and noncompetitive

inhibition, with reference to one example of

each.

**7.6.5** Explain the control of metabolic pathways by end-product

inhibition, including the role of allosteric sites.

[*You should be able to explain and use a named example of each type of inhibition]*