

Proteins Mark Scheme

6.			C		
2.	(a)	(i)	degradation substrate (1) (1)	2	
		(ii)	<p>Prediction - (All or some) lactose would not be removed from the milk /milk would contain lactose/it would not be lactose free (1)</p> <p>Explanation - Enzyme/lactase denatured</p> <p>OR</p> <p>enzyme/active site has changed shape/description of change of shape (1)</p>	2	<p>Not acceptable: might/may contain lactose/ milk will be the same/milk will be unchanged</p> <p>In the context of this particular question, enzyme destroyed/does not work will be acceptable</p> <p>Not acceptable:</p> <ul style="list-style-type: none"> enzyme/active site has changed explanation including reference to above the optimum or above 37°C
	(b)		Speed up (chemical/biological/biochemical) reactions/allow reactions to occur at lower temperatures/lower the activation energy	1	<p>..unchanged in process does not negate.</p> <p>Not acceptable: Control reactions Can break down/build up...</p>
	(c)		Protein/amino acids	1	

5.			C	
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4.	(a)	Degradation/breakdown	1	
	(b)	<p>1. Enzyme and substrate join/fit/bind together OR substrate joins/fits/binds with active site OR enzyme-substrate complex forms OR enzyme and substrate are complementary/specific. (1)</p> <p>2. Reaction occurs at <u>active site</u> of the enzyme OR enzyme has an <u>active site</u>. (1)</p> <p>3. (Two/smaller) <u>product(s)</u> made/formed/released. (1)</p>	3	Do not award mark for point 3 if description relates to synthesis reaction.