

Question	Marking Guidance	Mark	Comments
05.1	1. Condensation reaction between amino acids; 2. (Forming) peptide bonds; 3. Creating (specific) sequence/order of amino acids;	3 (3 x AO1)	1. Accept descriptions of condensation reaction: eg loss of water
Question	Marking Guidance	Mark	Comments
05.2	(Similarity) 1. Substrate fits/binds to active site OR Enzyme-substrate complex (formed); (Difference) 2. Active site changes shape, but does not change in lock and key OR (Initially) active site not complementary to substrate with induced-fit, but is complementary in lock and key;	2 (2 x AO2)	2. Reject 'substrate changes shape' 2. Accept 'flexible' for changes shape and 'rigid' for does not change
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05.3	Lower/reduce activation energy (needed to start a reaction);	1 (AO1)	
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05.4	Correct answer for 2 marks = 300;; Accept for 1 mark, 2 000 000 or 2×10^6 (correct calculation of maltase rate per second) OR $6 \times 10^8 \div 4 \times 10^7$ OR $\times 15$ (correct division but not multiplied by 20)	2 (2 x AO2)	

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05.5	Increased maltase concentration;	1 (AO3)	

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06.1	1. (Is) charged/polar OR (Is) part of haem(oglobin); 2. (So) binds/associates/loads (with) oxygen OR (So) forms oxyhaemoglobin OR (So) transports oxygen;	2 (2 x AO1)	1. Accept Fe^{2+} OR Fe^{3+} for 'charged' 2. Accept 'carries' for transports

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06.2	1. Less/no ferroportin hydrolysis/breakdown; 2. (So) more ferroportin (in cell-surface membranes); 3. (So) more iron (ion) transport from cytoplasm/cell;	3 (3 x AO3)	1. and 2. Accept 'channel protein' for ferroportin 2. and 3. Accept 'many' for more