

Question	Marking Guidance	Mark	Comments
06.1	1. (before reaction) active site not complementary to/does not fit substrate; 2. Shape of active site changes as substrate binds/as enzyme-substrate complex forms; 3. Stressing/distorting/bending bonds (in substrate leading to reaction);	2 max	Note. Points 1 and 2 may be made in one statement and 'complementary' introduced at any point. 2. Ignore references to how shape change is caused Points 1&2 – active site mentioned once applies for both points
06.2	1. Tangent to curve drawn; 2. Value in range of 8 to 11;	2	1. Tangent drawn at about 10 minutes 2.1 mark only for correct answer
06.3	1. (Rate of) increase in concentration of maltose slows as substrate/starch is used up OR High initial rate as plenty of starch/substrate/more E-S complexes; 2. No increase after 25 minutes/at end/levels off because no substrate/starch left;	2	1. Reject ref. to <u>amylase</u> being used up 2. accept 'little' 2. Ignore references to substrate a limiting factor
06.4	1. Make/use maltose solutions of known/different concentrations (and carry out quantitative Benedict's test on each); 2. (Use colorimeter to) measure colour/colorimeter value of each solution and plot calibration curve/graph described; 3. Find concentration of sample from calibration curve;	3	2. Axes must be correct if axes mentioned, concentration on x-axis and colorimeter reading on y-axis