

Question 5

question	answers	extra information	mark
5(a)	LHS – carbon dioxide / CO ₂	allow CO ₂ ignore CO ²	1
	RHS glucose / carbohydrate / sugar	in either order allow starch allow C ₆ H ₁₂ O ₆ / C ₆ H ₁₂ O ₆ ignore C ⁶ H ¹² O ⁶	1
	oxygen	allow O ₂ / O ₂ ignore O ² / O	1

Question 5 continues on the next page...

Question 5 continued...

question	answers	extra information	mark
<p>5(b)</p>	<p>any five from:</p> <ul style="list-style-type: none"> • factor 1: CO₂ (concentration) • effect - as CO₂ increases so does rate and then it levels off or shown in a graph • explanation: (graph increases) because CO₂ is the raw material or <u>used</u> in photosynthesis / converted to organic substance / named eg <p>or</p> <p>(graph levels off) when another factor limits the rate.</p> <ul style="list-style-type: none"> • factor 2: temperature • effect – as temperature increases, so does the rate and then it decreases or shown in a graph • explanation: (rise in temp) increases rate of chemical reactions / more kinetic energy <p>or</p> <p>(decreases) because the enzyme is denatured.</p>	<p>accept points made via an annotated / labelled graph</p> <p>allow warmth / heat</p> <p>allow 'it peaks' for description of both phases</p> <p>allow molecules move faster / more collisions</p> <p>context must be clear = high temperature</p> <p>allow other factor plus effect plus explanation: eg light wavelength / colour / pigments / chlorophyll / pH / minerals / ions / nutrients / size of leaves</p> <p>2nd or 3rd mark can be gained from correct description and explanation</p>	<p>5</p>
<p>Total</p>			<p>8</p>