

**Question 24** (5 marks)

Design an experiment that tests the effect of opening a window on the blood oxygen saturation level of the people in a room.

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<p>Independent variable</p>	<p>The window being open or closed</p>
<p>Control</p>	<p>Having the window shut, then test blood.</p>
<p>Variables to be kept constant and justification for keeping each constant.</p>	<p>Variable 1: Temperature within the room.                  Justification: Temperature alters the CO<sub>2</sub> and O<sub>2</sub> saturation levels in liquids. Blood is a liquid therefore results will be altered based on varied temperature.</p> <p>Variable 2: The amount of time from opening of window to blood testing must remain constant                  Justification: The time taken for blood oxygen saturation to be affected may rely on time therefore results may be affected relating to time from window opening to blood testing</p>
<p>Technology used to measure oxygen saturation in blood</p>	<p>Blood analysis machine.</p>