

Foundation Combined — only core Foundation content included.

**Q1. Write the word equations for anaerobic respiration in (a) animals and (b) yeast.**

[2 marks]

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**Q2. Explain what an oxygen debt is and how it is repaid after exercise.**

[3 marks]

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**Q3. Describe TWO commercial uses of fermentation in yeast.**

[2 marks]

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**Total: 7 marks**

**Q1 (2 marks)**

Write the word equations for anaerobic respiration in (a) animals and (b) yeast.

- (a) Glucose → lactic acid (+ small amount of energy) [1]
- (b) Glucose → ethanol + carbon dioxide (+ small amount of energy) [1]

**Q2 (3 marks)**

Explain what an oxygen debt is and how it is repaid after exercise.

- During intense exercise, muscles use anaerobic respiration → lactic acid accumulates [1]
- After exercise, extra oxygen is needed to convert lactic acid back to glucose (in liver) [1]
- This extra O<sub>2</sub> requirement is the oxygen debt — repaid by continued elevated breathing rate [1]

**Q3 (2 marks)**

Describe TWO commercial uses of fermentation in yeast.

- Brewing: yeast produces ethanol → beer/wine [1]
- Bread-making: yeast produces CO<sub>2</sub> → dough rises [1]