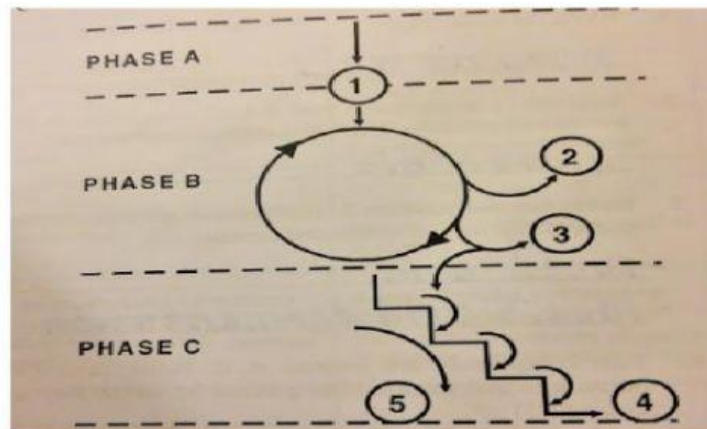


5. Cellular Respiration

1. Which statement best describes respiration? *

- ☐ the release of energy from energy-rich organic compounds in animal and plant cells
- ☐ the taking in of oxygen and the release of carbon dioxide
- ☐ the taking in of oxygen for the oxidation of food molecules with the release of energy
- ☐ the release of energy, either as a result of oxidation using absorbed oxygen, or anaerobically, from energy-rich organic compounds such as food molecules, in all living cells

Questions 2 to 6 refers to the diagram below.



2. In which part of the cell does the phase A take place? *

- ☐ Chloroplast
- ☐ Mitochondrion
- ☐ cytosol
- ☐ Golgi apparatus

3. The 3-carbon compound, labelled 1 is: *

- ☐ acetaldehyde
- ☐ ethanol
- ☐ lactic acid
- ☐ pyruvic acid

4. Which of the following is represented by phase B? *

- ☐ Light-independent phase
- ☐ Kreb's cycle
- ☐ oxidative phosphorylation
- ☐ Light-dependent phase

5. The two compounds released (numbers 2 and 3) during phase B are: *

- ☐ ATP and carbon dioxide
- ☐ carbon dioxide and water
- ☐ carbon dioxide and hydrogen
- ☐ carbon dioxide and NAD

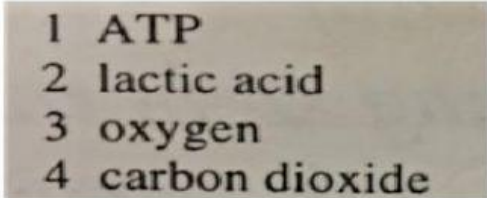
6. In phase C two products are formed, numbers 4 and 5. These are: *

- ☐ oxygen and ADP
- ☐ water and ATP
- ☐ water and oxygen
- ☐ ATP and oxygen

7. The final hydrogen acceptor during oxidative phosphorylation is: *

- ☐ oxygen
- ☐ ADP
- ☐ ATP
- ☐ water

8. During strenuous exercise which of the following substances are depleted (become less) from the muscle cells? *



1 ATP
2 lactic acid
3 oxygen
4 carbon dioxide

- ☐ 1 and 2
- ☐ 3 and 4
- ☐ 1 and 3
- ☐ 1, 2 and 3

9. Aerobic and anaerobic respiration have which one of the following statements in common? *

- ☐ carbon dioxide is used
- ☐ carbon dioxide and water are released
- ☐ energy is released by oxidation of organic compounds
- ☐ oxygen is necessary for all the reactions

10. The muscles of a tennis player get tired at the end of a match. Which of the following chemical substances have increased in concentration in the muscles to cause this feeling? *

- ☐ ethanol
- ☐ ATP
- ☐ glycogen
- ☐ lactic acid