

19 What is produced by anaerobic respiration in human muscles?

	carbon dioxide	lactic acid	water
A	✓	✓	✗
B	✓	✗	✓
C	✗	✓	✗
D	✗	✗	✓

key

✓ = substance is produced

✗ = substance is **not** produced

17 A person exercised vigorously for one minute and then rested for one hour.

Which statements about lactic acid are correct?

- 1 During exercise, lactic acid is produced in the muscles and diffuses into the blood.
- 2 The blood transports lactic acid to the liver.
- 3 Lactic acid is broken down by anaerobic respiration.

A 1, 2 and 3 B 1 and 2 only C 2 and 3 only D 2 only

19 The processes listed occur in living organisms.

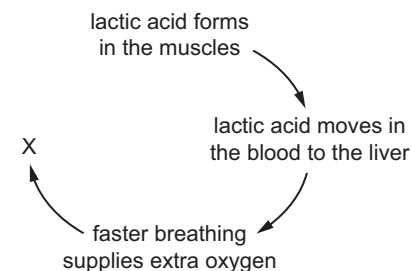
- 1 cell division
- 2 diffusion
- 3 muscle contraction
- 4 osmosis

Which processes require energy from respiration?

A 1, 2, 3 and 4 B 1 and 3 only C 2 and 3 only D 3 and 4 only

22 After a race, athletes experience oxygen debt.

The diagram shows how the oxygen debt is removed.



What happens at X?

- A aerobic respiration of glucose
 B aerobic respiration of lactic acid
 C anaerobic respiration of glucose
 D anaerobic respiration of lactic acid

20 Which sequence of statements explains the build-up and removal of an oxygen debt?

- 1 Anaerobic respiration occurs in muscles during vigorous exercise.
- 2 Faster and deeper breathing continues after exercise.
- 3 Glucose is converted to lactic acid.
- 4 Lactic acid builds up in muscles causing an oxygen debt.
- 5 Oxygen enables the continued aerobic respiration of lactic acid.

A 1 → 3 → 4 → 2 → 5

B 1 → 3 → 2 → 4 → 5

C 3 → 4 → 5 → 1 → 2

D 3 → 4 → 1 → 5 → 2

For each molecule of glucose used in yeast, how many more molecules of carbon dioxide gas are produced by aerobic respiration compared with anaerobic respiration?

- A** 1 more
B 2 more
C 4 more
D 6 more

[6]