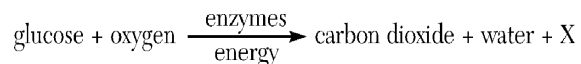


1 star cellular respiration

Name: _____

Date: _____

1. Base your answer(s) to the following question(s) on the word equation and on your knowledge of biology.



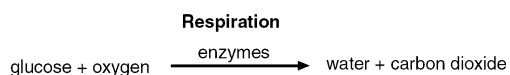
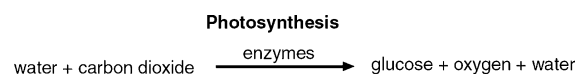
Name the process represented by the equation.

2. Base your answer(s) to the following question(s) on the information below and on your knowledge of biology.

Carbon exists in a simple organic molecule in a leaf and in an inorganic molecule in the air humans exhale.

Identify the carbon-containing molecule that humans exhale and the process that produces it.

3. Base your answer(s) to the following question(s) on the summary equations of two processes and on your knowledge of biology.



State *one* reason *each* of the two processes is important for living things.

Photosynthesis:

Respiration:

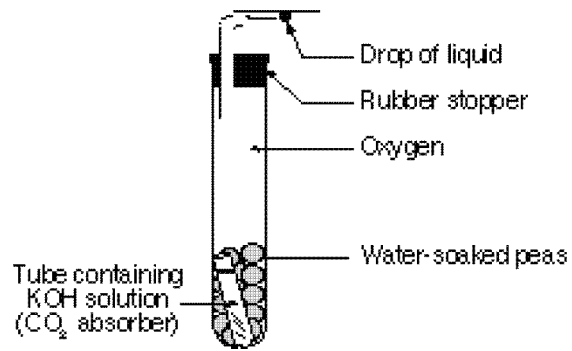
4. The energy found in ATP molecules synthesized in animal cells comes directly from

- A. sunlight
- B. organic molecules
- C. minerals
- D. inorganic molecules

5. A green plant is kept in a brightly lighted area for 48 hours. What will most likely occur if the light intensity is reduced slightly during the next 48 hours?

- A. Photosynthesis will stop completely.
- B. The rate at which nitrogen is used by the plant will increase.
- C. The rate at which oxygen is released from the plant will decrease.
- D. Glucose production inside each plant cell will increase.

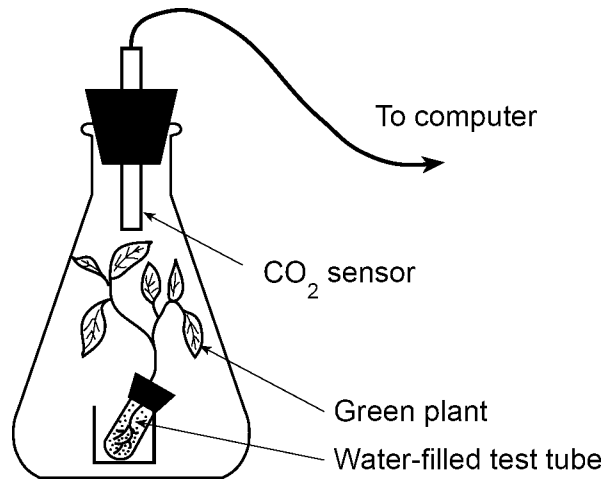
6. In the accompanying demonstration, which process performed by the peas when they start to grow causes the drop of liquid to move to the left?



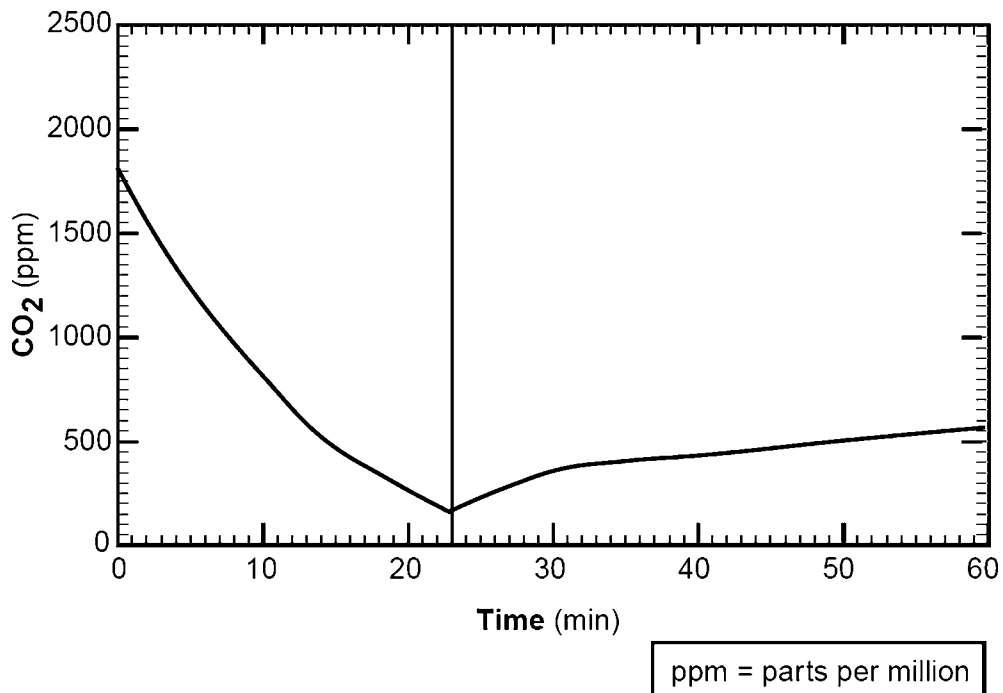
- A. protein synthesis B. photosynthesis
C. digestion D. cellular respiration

7. Base your answer(s) to the following question(s) on the provided information and on your knowledge of biology.

A small green plant was placed in a flask as shown below. A sensor that measures the CO₂ content of the air in the flask was inserted, and then the flask was sealed with a rubber stopper. The other end of the sensor was connected to a computer to monitor and record CO₂ levels in the flask over a period of time.



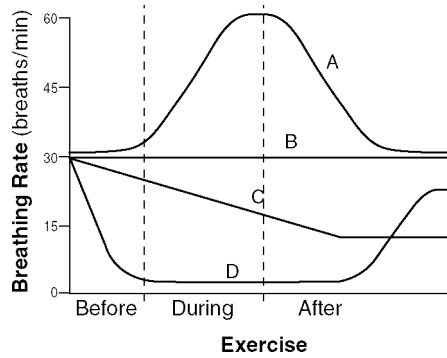
For part of the time the flask was placed in bright light and for part of the time it was placed in total darkness. The graph below shows data that were recorded by the sensor over a period of time.



Which condition most likely produced the effect on CO₂ level over the first 23 minutes?

- A. The light was on for the entire 23 minutes.
- B. The light was off for the entire 23 minutes.
- C. The light was off at the start and turned on after 10 minutes.
- D. The light could have been either on or off because it would have had no effect on the CO₂ level.

8. Which line in the graph below best illustrates an effect of the carbon dioxide level in the blood on breathing rate before, during, and after a period of exercise?

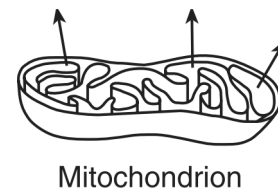


- A. *A* B. *B* C. *C* D. *D*

9. Which statement best describes cellular respiration?

- A. It occurs in animal cells but not in plant cells.
- B. It converts energy in food into a more usable form.
- C. It uses carbon dioxide and produces oxygen.
- D. It stores energy in food molecules.

10. The diagram below represents a structure involved in cellular respiration. The release of which substance is represented by the arrows?



- A. glucose
- B. oxygen
- C. carbon dioxide
- D. DNA

1 star cellular respiration 05/28/2015

1.
Answer: respiration or cell respiration or aerobic respiration or oxidation.
2.
Answer: carbon dioxide and respiration.
3.
Answer: Photosynthesis: – glucose produced is basis of all food chains – O₂ released is needed by aerobic organisms – changes light energy to chemical energy
Respiration: – supplies energy for metabolism – supplies CO₂ for photosynthesis
4.
Answer: B
5.
Answer: C
6.
Answer: D
7.
Answer: A
8.
Answer: A
9.
Answer: B
10.
Answer: C