NUNAVUT SCIENCE 10 · UNIT 3 · 10 QUESTIONS

# Biology — Practice Test

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**1** **A plant cell is placed in a concentrated salt solution. Water leaves the cell, and the most visible result inside the cell is that**

- **A** The cell wall bursts
- **B** The central vacuole fills and the cell becomes more rigid
- **C** The cytoplasm shrinks and the cell membrane pulls away from the cell wall
- **D** The chloroplasts move out of the cell

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2 **Increasing the temperature of a solution usually increases the rate of diffusion because**

A The particles move faster and collide more often

B The particles become larger

C The membrane becomes completely permeable to every substance

D The concentration gradient disappears

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3 **Most photosynthesis in a flowering plant occurs in the**

A Root hairs, because they are close to water

B Mesophyll cells of the leaves, because they contain many chloroplasts

C Xylem, because it transports water

D Petals, because they are brightly coloured

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**4** **The two substances required for cellular respiration are**

- **A** Carbon dioxide and water
- **B** Oxygen and carbon dioxide
- **C** Glucose and carbon dioxide
- **D** Glucose and oxygen

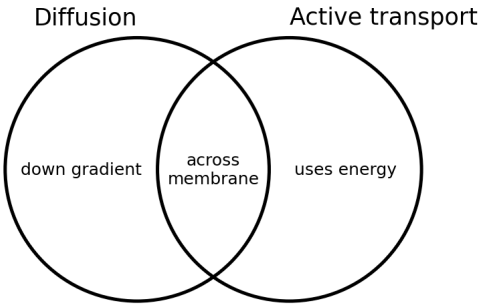
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**5** **A group of germinating seeds consumes 0.45 mL of oxygen in 15 min. The average rate of oxygen consumption, recorded to the nearest hundredth, is _____ mL/min**

ANSWER _____

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**6** **The Venn diagram compares diffusion and active transport. The feature shared by both kinds of transport is that they**




A move substances down a concentration gradient

B move substances across a membrane

C use cellular energy

D move only water

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7 **The waxy cuticle on the surface of a leaf helps the plant by**

- A Reducing water loss from the leaf
- B Producing seeds
- C Absorbing minerals from the air
- D Opening and closing the stomata

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8 **The coarse adjustment knob on a microscope should be used only with the low-power objective because, at high power,**

- A The eyepiece will rotate out of the tube
- B The light source will become too bright
- C The field of view becomes completely dark
- D The objective lens is very close to the slide and a large movement could drive it into the slide

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9 **A student counts the stomata in four microscope fields and records 12, 16, 14, and 18. The mean number of stomata per field, recorded as a whole number, is _____**

ANSWER _____

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10 **A student compares oxygen production by the same species of aquatic plant under two light intensities. Water temperature, water volume, and plant size are kept the same. The independent variable in this investigation is the**

A Amount of oxygen produced

B Light intensity

C Water temperature

D Size of the plant

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# ANSWER KEY

1. C
2. A
3. B
4. D
5. 0.03
6. B
7. A
8. D
9. 15
10. B

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