DELAWARE BIOLOGY · UNIT 1 · 25 QUESTIONS

Cells and Molecular Biology — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **Which term is defined as follows: the boundary that controls what enters and leaves a cell?**

- A cell membrane
- B mitochondrion
- C nucleus
- D ribosome

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2 **Which of the following is an example of cell membrane?**

- A a power plant inside the cell
- B a gate that lets some molecules pass
- C a library holding the cell instructions
- D a workshop that assembles proteins

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3 **Which statement best describes cell membrane?**

A mitochondria carry out cellular respiration to release usable energy

B the nucleus directs cell activity through its genetic instructions

C the membrane is selectively permeable, not fully open or closed

D ribosomes read instructions and join amino acids into proteins

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4 **Which term is defined as follows: the organelle that releases energy from food molecules?**

A cell membrane

B mitochondrion

C nucleus

D ribosome

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5 **Which of the following is an example of mitochondrion?**

A a gate that lets some molecules pass

B a library holding the cell instructions

C a power plant inside the cell

D a workshop that assembles proteins

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6 **Which statement best describes mitochondrion?**

A the membrane is selectively permeable, not fully open or closed

B the nucleus directs cell activity through its genetic instructions

C ribosomes read instructions and join amino acids into proteins

D mitochondria carry out cellular respiration to release usable energy

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7 **Which term is defined as follows: the organelle that holds most of the genetic material?**

- A cell membrane
- B mitochondrion
- C nucleus
- D ribosome

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8 **Which of the following is an example of nucleus?**

- A a gate that lets some molecules pass
- B a power plant inside the cell
- C a workshop that assembles proteins
- D a library holding the cell instructions

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9 **Which statement best describes nucleus?**

A the nucleus directs cell activity through its genetic instructions

B the membrane is selectively permeable, not fully open or closed

C mitochondria carry out cellular respiration to release usable energy

D ribosomes read instructions and join amino acids into proteins

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10 **Which term is defined as follows: the structure that builds proteins?**

A cell membrane

B mitochondrion

C nucleus

D ribosome

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11 **Which of the following is an example of ribosome?**

- A a workshop that assembles proteins
- B a gate that lets some molecules pass
- C a power plant inside the cell
- D a library holding the cell instructions

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12 **Which statement best describes ribosome?**

- A the membrane is selectively permeable, not fully open or closed
- B ribosomes read instructions and join amino acids into proteins
- C mitochondria carry out cellular respiration to release usable energy
- D the nucleus directs cell activity through its genetic instructions

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13 **Which term is defined as follows: the organelle where photosynthesis takes place?**

A chloroplast

B cell membrane

C mitochondrion

D nucleus

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14 **Which of the following is an example of chloroplast?**

A a gate that lets some molecules pass

B a solar panel inside a plant cell

C a power plant inside the cell

D a library holding the cell instructions

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15 **Which statement best describes chloroplast?**

A the membrane is selectively permeable, not fully open or closed

B mitochondria carry out cellular respiration to release usable energy

C chloroplasts capture light energy to build sugars

D the nucleus directs cell activity through its genetic instructions

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16 **Which term is defined as follows: a storage compartment inside a cell?**

A cell membrane

B vacuole

C mitochondrion

D nucleus

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17 **Which of the following is an example of vacuole?**

A a gate that lets some molecules pass

B a power plant inside the cell

C a warehouse holding water and materials

D a library holding the cell instructions

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18 **Which statement best describes vacuole?**

A the membrane is selectively permeable, not fully open or closed

B mitochondria carry out cellular respiration to release usable energy

C the nucleus directs cell activity through its genetic instructions

D a large central vacuole stores water and helps support plant cells

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19 **Which term is defined as follows: the movement of water across a selectively permeable membrane?**

A cell membrane

B mitochondrion

C osmosis

D nucleus

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20 **Which of the following is an example of osmosis?**

A a gate that lets some molecules pass

B a power plant inside the cell

C a library holding the cell instructions

D water moving toward the saltier side

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21 **Which statement best describes osmosis?**

- **A** osmosis moves water from lower to higher solute concentration
- **B** the membrane is selectively permeable, not fully open or closed
- **C** mitochondria carry out cellular respiration to release usable energy
- **D** the nucleus directs cell activity through its genetic instructions

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22 **Which term is defined as follows: the movement of particles from higher to lower concentration?**

- **A** cell membrane
- **B** mitochondrion
- **C** nucleus
- **D** diffusion

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23 **Which of the following is an example of diffusion?**

- A perfume spreading through a room
- B a gate that lets some molecules pass
- C a power plant inside the cell
- D a library holding the cell instructions

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24 **Which statement best describes diffusion?**

- A the membrane is selectively permeable, not fully open or closed
- B diffusion needs no energy input from the cell
- C mitochondria carry out cellular respiration to release usable energy
- D the nucleus directs cell activity through its genetic instructions

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25 **Which term is defined as follows: movement of substances against a concentration gradient using energy?**

A active transport

B cell membrane

C mitochondrion

D nucleus

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ANSWER KEY

1. A
2. B
3. C
4. B
5. C
6. D
7. C
8. D
9. A
10. D
11. A
12. B
13. A
14. B
15. C
16. B
17. C
18. D
19. C
20. D
21. A
22. D
23. A
24. B
25. A

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