BIOLOGY 2201 · NEWFOUNDLAND AND LABRADOR

# Biology 2201
## Practice Test

### Unit A: Matter and Energy for Life

25 Questions

Original practice test based on the Newfoundland and Labrador curriculum. Work through each question, then check your answers at the end.

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.

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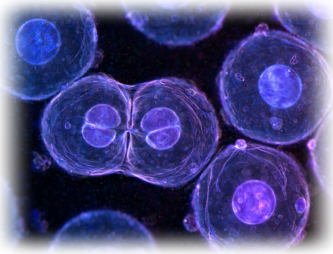


Question 1

Recall the definition. The organelle where most ATP is produced in a eukaryotic cell is the

A) mitochondrion

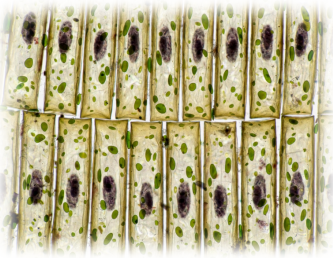
B) ribosome

C) nucleus

D) Golgi body

Understand It with Pulse

Flag a mistake



Question 2

Think about the definition. Photosynthesis in plants mainly takes place in the

A) mitochondrion

B) chloroplast

C) vacuole

D) ribosome

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Flag a mistake

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Question 3

Use the standard definition. Hydrolysis of ATP to ADP releases

A) glucose only

B) oxygen only

C) energy for cell work

D) carbon dioxide only

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Question 4

Apply the definition carefully. The reactants of photosynthesis are

A) glucose and oxygen

B) oxygen and water

C) glucose and carbon dioxide

D) carbon dioxide and water

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Question 5

Consider the meaning of the term. The products of aerobic cellular respiration are

A) carbon dioxide, water, and ATP

B) glucose and oxygen

C) lactic acid and ATP

D) oxygen and glucose

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Question 6

Review the key idea. The monomer or building block of starch is

A) amino acid

B) glucose

C) glycerol

D) nucleotide

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Question 7

Check the definition first. An enzyme speeds a reaction by

A) raising activation energy

B) being used up in the reaction

C) lowering activation energy

D) changing the products into reactants

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Question 8

Start from the definition. Diffusion moves particles from

A) lower concentration to higher concentration

B) a cell to the nucleus only

C) water to salt only

D) higher concentration to lower concentration

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Question 9

Remember how the term is defined. Osmosis is the diffusion of

A) water across a membrane

B) glucose across a membrane

C) proteins across a membrane

D) salts out of a cell only

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Question 10

A cube shaped cell has side 2 units. Its surface area to volume ratio is

Understand It with Pulse | Flag a mistake

Question 11

Think about the rule. Aerobic respiration of one glucose molecule yields about how many ATP?

A) 2

B) 4

C) 36

D) 100

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Question 12

Recall the rule. Extreme pH can change an enzyme by

A) making it work faster always

B) turning it into a substrate

C) removing its atoms

D) denaturing it

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Question 13

Apply the rule. Active transport differs from diffusion because it

A) requires energy and can move against a gradient

B) never uses a membrane

C) only moves water

D) always moves down a gradient

Understand It with Pulse Flag a mistake



Question 14

Consider the rule in general. The main pigment that absorbs light in photosynthesis is

A) haemoglobin

B) chlorophyll

C) melanin

D) carotene only

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Question 15

Review the rule. The organelle where most ATP is produced in a eukaryotic cell is the

A) ribosome

B) nucleus

C) mitochondrion

D) Golgi body

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Question 16

Think about the concept. Photosynthesis in plants mainly takes place in the

A) mitochondrion

B) vacuole

C) ribosome

D) chloroplast

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Question 17

Recall the concept. Hydrolysis of ATP to ADP releases

A) energy for cell work

B) glucose only

C) oxygen only

D) carbon dioxide only

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Question 18

Apply the concept. The reactants of photosynthesis are

A) glucose and oxygen

B) carbon dioxide and water

C) oxygen and water

D) glucose and carbon dioxide

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Question 19

Consider the concept in general. The products of aerobic cellular respiration are

A) glucose and oxygen

B) lactic acid and ATP

C) carbon dioxide, water, and ATP

D) oxygen and glucose

Understand It with Pulse | Flag a mistake

Question 20

Review the concept. The monomer or building block of a fat is

A) amino acid

B) glucose

C) nucleotide

D) fatty acid and glycerol

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Question 21

Think about the principle. An enzyme speeds a reaction by

A) lowering activation energy

B) raising activation energy

C) being used up in the reaction

D) changing the products into reactants

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Question 22

Recall the principle. Diffusion moves particles from

A) lower concentration to higher concentration

B) higher concentration to lower concentration

C) a cell to the nucleus only

D) water to salt only

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Question 23

Apply the principle. Osmosis is the diffusion of

A) glucose across a membrane

B) proteins across a membrane

C) water across a membrane

D) salts out of a cell only

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Question 24

A cube shaped cell has side 4 units. Its surface area to volume ratio is

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Question 25

Review the principle. Aerobic respiration of one glucose molecule yields about how many ATP?

A) 36

B) 2

C) 4

D) 100

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# ANSWER KEY

1. A
2. B
3. C
4. D
5. A
6. B
7. C
8. D
9. A
10. 3
11. C
12. D
13. A
14. B
15. C
16. D
17. A
18. B
19. C
20. D
21. A
22. B
23. C
24. 1.5
25. A

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