BIOLOGY · ALABAMA

Biology
Practice Test

Unit 1: Cells and Molecular Biology

25 Questions

Original practice test based on the Alabama 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

Which organelle produces most of a cell ATP

A) Nucleus

B) Mitochondrion

C) Ribosome

D) Golgi apparatus

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Question 2

The organelle where proteins are assembled from amino acids is the

A) Lysosome

B) Ribosome

C) Vacuole

D) Cell membrane

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Question 3

The structure that controls which substances enter and leave a cell is the

A) Vacuole

B) Nucleus

C) Cell membrane

D) Cytoskeleton

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Question 4

In an animal cell most of the DNA is stored in the

A) Mitochondrion

B) Ribosome

C) Golgi apparatus

D) Nucleus

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Question 5

The organelle that packages proteins for transport out of a cell is the

A) Golgi apparatus

B) Lysosome

C) Nucleus

D) Vacuole

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Question 6

The organelle that breaks down worn out cell parts with enzymes is the

A) Ribosome

B) Lysosome

C) Mitochondrion

D) Cell membrane

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Question 7

In a plant cell photosynthesis takes place in the

A) Mitochondrion

B) Nucleus

C) Chloroplast

D) Ribosome

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Question 8

The large organelle that stores water in a plant cell is the

A) Golgi apparatus

B) Lysosome

C) Mitochondrion

D) Central vacuole

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Question 9

A prokaryotic cell differs from a eukaryotic cell because it has no

A) Membrane bound nucleus

B) Cell membrane

C) Ribosomes

D) DNA

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Question 10

Which statement is part of cell theory

A) All living things are made of one or more cells

B) Cells can form from nonliving matter

C) Only animals are made of cells

D) Cells are all identical in size

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Question 11

Diffusion is the movement of particles from an area of high concentration to an area of

A) Low concentration

B) High pressure

C) Low temperature

D) High energy

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Question 12

Osmosis is the diffusion of which substance across a cell membrane

A) Glucose

B) Water

C) Oxygen

D) Carbon dioxide

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Question 13

Active transport moves substances against a concentration gradient and requires

A) Light

B) Heat

C) ATP

D) Water

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Question 14

An enzyme speeds up a chemical reaction in a cell by

A) Raising the temperature of the whole cell

B) Being used up in the reaction

C) Lowering the activation energy needed

D) Adding energy to the products

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Question 15

The part of an enzyme where a substrate binds is called the

A) Active site

B) Cell wall

C) Product site

D) Membrane pore

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Question 16

Very high temperature can stop an enzyme from working because it causes the enzyme to

A) Multiply

B) Denature

C) Replicate

D) Photosynthesize

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Question 17

In a DNA molecule the base adenine always pairs with

A) Guanine

B) Cytosine

C) Thymine

D) Uracil

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Question 18

The shape of a DNA molecule is best described as a

A) Single strand

B) Triple helix

C) Flat sheet

D) Double helix

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Question 19

The monomer that makes up a protein is an

A) Amino acid

B) Fatty acid

C) Nucleotide

D) Glucose unit

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Question 20

The monomer that makes up a nucleic acid is a

A) Amino acid

B) Nucleotide

C) Fatty acid

D) Glycerol unit

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Question 21

The process in which a DNA sequence is copied into messenger RNA is called

A) Translation

B) Replication

C) Mutation

D) Transcription

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Question 22

During translation the molecule that carries an amino acid to a ribosome is

A) Transfer RNA

B) DNA

C) Glucose

D) ATP

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Question 23

A group of three bases on messenger RNA that codes for one amino acid is a

A) Gene

B) Chromosome

C) Codon

D) Anticodon

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Question 24

The phase of mitosis in which sister chromatids are pulled apart is

A) Prophase

B) Anaphase

C) Telophase

D) Interphase

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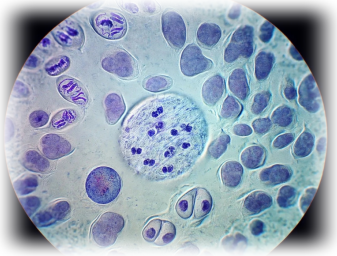

Question 25

One cell divides by mitosis four times in a row with no cells dying How many cells result

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ANSWER KEY

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

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