VIRGINIA BIOLOGY · UNIT 1

Cells and Molecular Biology — Practice Test

Virginia Biology • 25 questions

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 organelle produces most of a cell ATP**

A Nucleus

B Mitochondrion

C Ribosome

D Golgi apparatus

Understand It with Pulse | Flag a mistake

2 **The organelle where proteins are assembled from amino acids is the**

- A Lysosome
- B Ribosome
- C Vacuole
- D Cell membrane

Understand It with Pulse | Flag a mistake

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

- A Vacuole
- B Nucleus
- C Cell membrane
- D Cytoskeleton

Understand It with Pulse | Flag a mistake

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

A Mitochondrion

B Ribosome

C Golgi apparatus

D Nucleus

Understand It with Pulse | Flag a mistake

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

A Golgi apparatus

B Lysosome

C Nucleus

D Vacuole

Understand It with Pulse | Flag a mistake

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

- A Ribosome
- B Lysosome
- C Mitochondrion
- D Cell membrane

Understand It with Pulse | Flag a mistake

7 **In a plant cell photosynthesis takes place in the**

- A Mitochondrion
- B Nucleus
- C Chloroplast
- D Ribosome

Understand It with Pulse | Flag a mistake

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

- A Golgi apparatus
- B Lysosome
- C Mitochondrion
- D Central vacuole

Understand It with Pulse | Flag a mistake

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

- A Membrane bound nucleus
- B Cell membrane
- C Ribosomes
- D DNA

Understand It with Pulse | Flag a mistake

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

Understand It with Pulse | Flag a mistake

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

Understand It with Pulse | Flag a mistake

12 **Osmosis is the diffusion of which substance across a cell membrane**

- A Glucose
- B Water
- C Oxygen
- D Carbon dioxide

Understand It with Pulse | Flag a mistake

13 **Active transport moves substances against a concentration gradient and requires**

- A Light
- B Heat
- C ATP
- D Water

Understand It with Pulse | Flag a mistake

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

Understand It with Pulse | Flag a mistake

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

Understand It with Pulse | Flag a mistake

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

A Multiply

B Denature

C Replicate

D Photosynthesize

Understand It with Pulse | Flag a mistake

17 **In a DNA molecule the base adenine always pairs with**

A Guanine

B Cytosine

C Thymine

D Uracil

Understand It with Pulse | Flag a mistake

18 **The shape of a DNA molecule is best described as a**

- A Single strand
- B Triple helix
- C Flat sheet
- D Double helix

Understand It with Pulse | Flag a mistake

19 **The monomer that makes up a protein is an**

- A Amino acid
- B Fatty acid
- C Nucleotide
- D Glucose unit

Understand It with Pulse | Flag a mistake

20 **The monomer that makes up a nucleic acid is a**

- A Amino acid
- B Nucleotide
- C Fatty acid
- D Glycerol unit

Understand It with Pulse | Flag a mistake

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

- A Translation
- B Replication
- C Mutation
- D Transcription

Understand It with Pulse | Flag a mistake

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

A Transfer RNA

B DNA

C Glucose

D ATP

Understand It with Pulse | Flag a mistake

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

Understand It with Pulse | Flag a mistake

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

A Prophase

B Anaphase

C Telophase

D Interphase

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

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

© 2026 Brett Robbins. All Rights Reserved.