CALIFORNIA BIOLOGY · UNIT 1 · 25 QUESTIONS

Molecules to Organisms: Structure, Function, and Energy Flow — 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 **The organelle that produces most of the ATP in a eukaryotic cell is the**

- A Mitochondrion
- B Golgi body
- C Nucleus
- D Ribosome

Understand It with Pulse | Flag a mistake

2 **A cell that lacks a nucleus and membrane bound organelles is classified as**

A Photosynthetic

B Eukaryotic

C Multicellular

D Prokaryotic

Understand It with Pulse | Flag a mistake

3 **The main function of the cell membrane is to**

A Make proteins

B Produce glucose

C Store genetic information

D Control what enters and leaves the cell

Understand It with Pulse | Flag a mistake

4 **Ribosomes are the sites where**

A DNA is copied

B Proteins are assembled

C ATP is broken down

D Lipids are stored

Understand It with Pulse | Flag a mistake

5 **The organelle that modifies, sorts, and packages proteins is the**

A Golgi body

B Lysosome

C Chloroplast

D Vacuole

Understand It with Pulse | Flag a mistake

6 **Plant cells have a large central vacuole and a cell wall, while most animal cells do not have**

A A nucleus

B A plasma membrane

C Ribosomes

D Chloroplasts

Understand It with Pulse | Flag a mistake

7 **The monomer of a protein is a**

A Monosaccharide

B Amino acid

C Fatty acid

D Nucleotide

Understand It with Pulse | Flag a mistake

8 **Starch is a polysaccharide made of many units of**

A Nucleotides

B Glucose

C Fatty acids

D Amino acids

Understand It with Pulse | Flag a mistake

9 **A lipid bilayer is made mainly of**

A Proteins only

B Phospholipids

C Nucleic acids

D Monosaccharides

Understand It with Pulse | Flag a mistake

10 **An enzyme speeds up a reaction by lowering the**

- A Concentration of substrate
- B Temperature of the cell
- C Amount of product
- D Activation energy

Understand It with Pulse | Flag a mistake

11 **An enzyme works best at a particular pH and temperature because extreme conditions can change its**

- A Mass
- B Shape
- C Location in the cell
- D Charge only

Understand It with Pulse | Flag a mistake

12 **During photosynthesis, plants use carbon dioxide and water to produce**

A Protein and water

B ATP and nitrogen

C Starch and carbon dioxide

D Glucose and oxygen

Understand It with Pulse | Flag a mistake

13 **The light dependent reactions of photosynthesis take place in the**

A Stroma

B Nucleus

C Thylakoid membranes

D Mitochondrial matrix

Understand It with Pulse | Flag a mistake

14 **The Calvin cycle uses carbon dioxide to build**

A ATP only

B Water

C Sugars

D Oxygen gas

Understand It with Pulse | Flag a mistake

15 **Cellular respiration releases energy from glucose mainly in the form of**

A DNA

B Starch

C ATP

D Chlorophyll

Understand It with Pulse | Flag a mistake

16 **The first stage of cellular respiration, glycolysis, takes place in the**

A Nucleus

B Cytoplasm

C Mitochondrion

D Chloroplast

Understand It with Pulse | Flag a mistake

17 **Anaerobic respiration in muscle cells produces**

A Lactic acid

B Oxygen

C Carbon monoxide

D Glucose

Understand It with Pulse | Flag a mistake

18 **One molecule of glucose broken down by aerobic respiration yields far more ATP than fermentation because oxygen allows**

A Glycolysis only

B Photosynthesis to occur

C DNA replication

D Complete breakdown in the mitochondria

Understand It with Pulse | Flag a mistake

19 **A cell in an isotonic solution will**

A Swell and burst

B Shrink rapidly

C Stay about the same size

D Lose all its water

Understand It with Pulse | Flag a mistake

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

- A Sunlight
- B No energy
- C ATP
- D Osmosis only

Understand It with Pulse | Flag a mistake

21 **A stem cell is different from a fully specialised cell because a stem cell**

- A Has no membrane
- B Can divide and give rise to specialised cell types
- C Has no DNA
- D Cannot divide

Understand It with Pulse | Flag a mistake

22 **Differentiation in a multicellular organism means that cells**

A Stop dividing forever

B Become specialised for particular functions

C Lose their DNA

D Become identical in every way

Understand It with Pulse | Flag a mistake

23 **Negative feedback in the human body keeps conditions stable, for example when a rise in blood glucose triggers**

A A rise in body temperature

B Faster breathing only

C Insulin release

D More glucose release

Understand It with Pulse | Flag a mistake

24 **During mitosis, the chromosome number of the daughter cells compared with the parent cell is**

A Zero

B The same

C Double

D Half

Understand It with Pulse | Flag a mistake

25 **One cell divides by mitosis 3 times in a row with no cells dying How many cells result**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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