

BIOLOGY SAMPLE TEST 2

1. In the formation of a macromolecule, what type of reaction would join two subunits together?

- A) hydrophobic reaction
- B) hydrolysis reaction
- C) condensation reaction
- D) denaturation reaction

2. In bacteria, some of the functions of eukaryotic cells are performed by

- A) vesicles
- B) lysosomes
- C) mitochondria
- D) nucleoli
- E) the plasma membrane

3. Enzymes embedded in the membrane of the smooth ER

- A) synthesize lipids
- B) may be used for detoxification
- C) synthesize carbohydrates
- D) mostly are active only when associated with a membrane
- E) all of the above

4. Clathrin-coated pits are used to

- A) extrude bulk fluids from the cell
- B) allow desired molecules directly into the cytoplasm
- C) pass wastes in vesicles to the outside.
- D) bring desired substances from the environment into the cell in vesicles

5. Cystic fibrosis results from defective ion channels for

- A) Na⁺
- B) Cl⁻
- C) Ca⁺⁺
- D) ClO₃⁻
- E) H⁺

6. In aerobic cellular respiration, which generates more ATP, substrate-level phosphorylation or chemiosmosis?

- A) substrate-level phosphorylation
- B) chemiosmosis
- C) both generate the same amount of ATP
- D) neither generates any ATP

7. In anaphase I

- A) sister chromatids move toward opposite poles
- B) homologous chromosomes move toward opposite poles
- C) terminal chiasmata move toward opposite poles
- D) homologous chromosomes move toward the same pole
- E) homologous chromosomes move randomly toward either pole

8. The condensation of the chromosome portion containing the rRNA genes causes the disappearance of the

- A) nucleus
- B) aster
- C) centriole
- D) tubulin
- E) nucleolus

9. Since the first nucleotides cannot be linked in a newly synthesized strand in DNA replication, _____ is required.

- A) a DNA primer
- B) DNA polymerase
- C) ligase
- D) an RNA primer
- E) helicase

10. Which of the following are not matched correctly:

- A) virulent virus-lytic cycle
- B) temperate virus-non-infecting virus
- C) lysogenic virus-viral genome becomes part of the host genome
- D) lytic cycle-kills host cell
- E) none of the above

11. The skeletal event that terminates a person's vertical growth is

- A) the replacement of spongy bone by compact bone in the growth plate
- B) the death of Haversian cells in the growth plate
- C) the filling of Haversian canals with calcium in the growth plate
- D) the complete conversion of the growth plate from cartilage to bone

12. During muscle contraction, Ca⁺⁺ ions bind to

- A) troponin
- B) tropomyosin
- C) myosin
- D) acetylcholine
- E) actin

13. When triglycerides combine with proteins, they form small particles called

- A) jaundice
- B) bile
- C) omasum
- D) chylomicrons

14. Which of the following contains oxygenated blood in an adult human?

- A) right atrium
- B) pulmonary artery
- C) pulmonary vein
- D) all of the above
- E) none of the above

15. During exhalation in humans, air moves from the bronchus into the

- A) bronchioles
- B) alveoli
- C) nostrils
- D) pharynx
- E) trachea

16. GABA (gamma-aminobutyric acid) is normally found at

- A) neuromuscular junctions
- B) nodes of Ranvier
- C) sensory receptors
- D) excitatory synapses
- E) inhibitory synapses

17. The cells responsible for color vision in vertebrates are called

- A) rod cells
- B) cone cells
- C) bipolar cells
- D) cupula cells
- E) ampullae

18. Precursors of macrophages are called

- A) T cells
- B) killer cells
- C) B cells
- D) plasma cells
- E) monocytes

19. Which of the following would be least likely to be found in the glomerular filtrate?

- A) plasma proteins
- B) glucose and amino acids
- C) water
- D) urea
- E) all of the above are likely to be found in the glomerular filtrate

20. Ovulation is caused by the hormone

- A) FSH
- B) progesterone
- C) oxytocin
- D) estrogen
- E) LH