

KBC1 Introduction to Biology Version 1

Section: Science & Statistics • Total Questions: 10 • Format: Verified Q&A

1. A gene contains the sequence CGGCATACGGTACT that results in the amino acid sequence arg-ile-arg-tyr. A mutation in this gene removes the first G in the strand. What is true of this mutation's effect on the phenotype?

- (A) It will not affect the phenotype because the protein will be identical to the original protein.
 - (B) It will affect the phenotype because all the amino acids past this point will be different from the original protein.
 - (C) It will not affect the phenotype because only the first amino acid is different from the original protein.
 - (D) It will affect the phenotype because although most of the protein will be identical, the first amino acid will be different.
-

2. A molecule consists of a chain of glucose monomers linked together. What type of molecule is this?

- (A) A protein
 - (B) A nucleic acid
 - (C) A lipid
 - (D) A carbohydrate
-

3. Which comparison of DNA and RNA is correct?

- (A) DNA stores hereditary information; RNA is used to make proteins.
 - (B) DNA uses the base uracil; RNA uses the base thymine.
 - (C) DNA is single stranded; RNA is double stranded.
 - (D) DNA is a monomer; RNA is a polymer.
-

4. Which bond classifies the Na-Cl bond?

- (A) Covalent
 - (B) Hydrogen
 - (C) Metallic
 - (D) Ionic
-

5. Which of the following steps in DNA replication would occur second?

- (A) Complimentary nucleotides are added to each template strand.
 - (B) DNA molecule separates into two template strands.
 - (C) Two DNA molecules, each with a template strand and a new strand, are formed.
 - (D) DNA molecule unwinds.
-

6. What does point 2 indicate in the following cladogram?

- (A) The point at which species C and D diverged from species B
 - (B) The common ancestor of species A, B, C, and D
 - (C) The point at which species C and D diverged
 - (D) The point at which species B, C, and D diverged from species A
-

7. Which statement is true regarding mitosis?

- (A) During telophase, the chromosomes align in the center of the cell.
 - (B) During metaphase, the chromosomes condense.
 - (C) During prophase, the chromosomes become uncondensed and two new nuclei are formed.
 - (D) During anaphase, the chromatids separate and move to opposite poles.
-

8. Which molecule does a plant need from the environment in order to conduct photosynthesis?

- (A) Sugar
 - (B) Carbon dioxide
 - (C) Oxygen
 - (D) ATP
-

9. Caribou and reindeer are both herbivores whose diets consist of lichens and grasses. Which interaction is occurring between the caribou and the reindeer?

- (A) Commensalism
 - (B) Mutualism
 - (C) Parasitism
 - (D) Competition
-

10. Which organisms have vertebrae but lack a bony skeleton?

- (A) Amphibians
 - (B) Crocodilians
 - (C) Sharks and rays
 - (D) Primates
-