Biology chapter 133 mutations answers

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What is mutation very short answer? A mutation is a change in the DNA sequence of an organism. Mutations can result from errors in DNA replication during cell division, exposure to mutagens or a viral infection.

What summarizes the effects of mutations on living things? Mutational effects can be beneficial, harmful, or neutral, depending on their context or location. Most non-neutral mutations are deleterious. In general, the more base pairs that are affected by a mutation, the larger the effect of the mutation, and the larger the mutation's probability of being deleterious.

What do small changes in genes do? Most gene mutations have no effect on health. And the body can repair many mutations. Some mutations are even helpful. For example, people can have a mutation that protects them from heart disease or gives them harder bones.

What is the cellular machinery that replicates DNA? The machinery that copies a cell's DNA, known as the replisome, must overcome numerous impediments that arise from toxins in the cell and outside in the surrounding environment, as well as alternative DNA arrangements.

What is a mutation quizlet biology? mutation. (a) A change of the DNA sequence within a gene or chromosome of an organism resulting in the creation of a new character or trait not found in the parental type.

What is a mutation in biology? (myoo-TAY-shun) Any change in the DNA sequence of a cell. Mutations may be caused by mistakes during cell division, or they may be caused by exposure to DNA-damaging agents in the environment. Mutations can be harmful, beneficial, or have no effect.

What can cause a mutation? Mutations result either from errors in DNA replication or from the damaging effects of mutagens, such as chemicals and radiation, which react with DNA and change the structures of individual nucleotides.

What are examples of mutations?

Which mutation is harmful to the organism? What type of DNA mutation is most harmful? Missense, nonsense, frameshift, and oncogenetic mutations are considered the most harmful mutations as they can cause serious diseases in the affected organism.

What is a syndrome or disorder caused by a mutation? Genetic abnormalities are conditions caused by changes to the genes or chromosomes. Inherited disorders are caused by gene mutations. These include disorders such as cystic fibrosis, sickle cell disease, and Tay-Sachs disease.

How are genetic mutations passed from parent to offspring? Some mutations are hereditary because they are passed down to an offspring from a parent carrying a mutation through the germ line, meaning through an egg or sperm cell carrying the mutation. There are also nonhereditary mutations that occur in cells outside of the germ line, which are called somatic mutations.

What are two kinds of frameshift mutations? Frameshift mutations occur in two types - insertion mutations and deletion mutations. The overall effect of both is similar - the translational reading frame is "shifted" out of alignment, resulting in a random amino acid sequence.

What is DNA copying itself called? DNA replication is the process by which the genome's DNA is copied in cells. Before a cell divides, it must first copy (or replicate) its entire genome so that each resulting daughter cell ends up with its own complete genome.

What is the replication machinery in DNA replication? In practice, the replication machinery is a massive complex coordinating many proteins all working at the site of replication, forming the "replisome". The replisome is responsible for copying the entirety of genomic DNA in each proliferative cell.

What is the replication of cellular genetic material? DNA replication is one of the most basic processes that occurs within a cell. Each time a cell divides, the two resulting daughter cells must contain exactly the same genetic information, or DNA, as the parent cell. To accomplish this, each strand of existing DNA acts as a template for replication.

What kind of flow of information is inside the cell? DNA ——>mRNA ——>Protein The flow of information in a cell proceeds from DNA to mRNA to protein. Flow of information is the central dogma of biology. A dogma is a principle or set of principles laid down by an authority as incontrovertibly true. Flow of information in a cell explains how DNA becomes E.

What are the current known methods of delivering genes to cells for gene therapy? Rather, it usually is delivered using a carrier called a vector. The most common gene therapy vectors are viruses. That's because they can recognize certain cells and carry genetic material into the genes of those cells.

Which mutation will cause translation to stop? A nonsense mutation, or its synonym, a stop mutation, is a change in DNA that causes a protein to terminate or end its translation earlier than expected. This is a common form of mutation in humans and in other animals that causes a shortened or nonfunctional protein to be expressed.

What is mutation quizlet? Mutation. a change in the genetic material of a cell; cause by a mistake during DNA replication. Gene Mutations. changes to a single gene.

Do all genes code for proteins? Only about 1 percent of DNA is made up of protein-coding genes; the other 99 percent is noncoding. Noncoding DNA does not provide instructions for making proteins.

Where does transcription take place? The process of Transcription takes place in the cytoplasm in prokaryotes and in nucleus in eukaryotes. It uses DNA as a template to make an RNA (mRNA) molecule. During transcription, a strand of mRNA is made that is complementary to a strand of DNA.

What is mutation short summary? A genetic mutation is a change to a gene's DNA sequence to produce something different. It creates a permanent change to that gene's DNA sequence. Genetic variations are important for humans to evolve, which is the process of change over generations. A sporadic genetic mutation occurs in one person.

What is a simple mutation? (myoo-TAY-shun) A change in the usual DNA sequence at a particular gene locus. Although the term often has a negative connotation, mutations (including polymorphisms) can be harmful, beneficial, or neutral in their effect on cell function. The term variant is sometimes used as a synonym for the term mutation.

What is a mutation kid friendly definition? A. mutation is a mistake or a change in a living thing's DNA. DNA, or deoxyribonucleic acid, is a chain of chemical units found in each cell of a living thing. The chemical units are arranged in a particular sequence, or order.

What is a short example of mutation? For example, sickle cell anemia is caused by a substitution in the beta-hemoglobin gene, which alters a single amino acid in the protein produced. change a codon to one that encodes the same amino acid and causes no change in the protein produced. These are called silent mutations.

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