

Biology - 12th Class Biology Chapter 23 Short Questions Preparation

Q1. How transgenic animals are developed?

Ans 1: It is possible to micro inject foreign genes into egg by hand, but another method uses vortex mixing. The egg are placed in an agitator with DNA and silicon-carbide needles, and the needles make tiny holes through which the DNA can enter. When these eggs are fertilized the resulting offspring are transgenic.

Q2. Name the salt tolerant plants and give its role in future.

Ans 1: Arabidopsis is salt tolerant plant. The cultivation of this plant at saline soil will reclaim the soil conditions. The acreage of the crop in a field will be increased in this way.

Q3. Write two application of polymerase chain reactions.

Ans 1: Two applications of polymerase chain reactions are as follows:

Ans 2: i) To diagnose viral infections, genetic disorder and cancer
ii) In forensic laboratories to identify criminals.

Q4. What are cumulus cells?

Ans 1: Cumulus cells are those cells which attached or cling to an egg after ovulation.

Q5. What is Genome?

Ans 1: A complete set of chromosomes which is haploid in number is called genome or a full set of genes of an individual is called genome.

Q6. What is cloning of a gene?

Ans 1: Cloning of gene produces many identical copies of a gene. Recombinant DNA technology is used when a very large quantity of gene is required. The use of polymerase chain reaction is a method to create many thousand copies of a particular gene at a time.

Q7. Name fire fly enzyme and give its role.

Ans 1: Luciferase is the fire fly enzyme it oxidize the luciferin protein and light is produced.

Q8. Write two uses of PCR.

Ans 1: i. It is used to make or clone of a gene
ii. PCR used for the purpose for diagnosis and monitoring of genetic diseases.

Q9. What are palindromic sequences? OR Define palindromic sequence.

Ans 1: Restriction enzymes cut the DNA at very specific sites characterized by specific sequence of four or six nucleotides arranged symmetrically in the reverse order. Such sequences are known as palindromic sequences.

Q10. Differentiate between Sanger's method and Maxam-Gilbert method of gene sequencing.

Ans 1: Sanger's method: In Sanger's method dideoxynucleoside triphosphates are used to terminate DNA synthesis at different sites.

Ans 2: Maxam-Gilbert method: In Maxam-Gilbert method DNA threads are chemically cut into pieces of different size.
