

Biology - 12th Class Biology Chapter 23 Short Questions Preparation

Q1. Differentiate between genome and probe.

Ans 1: Genome: 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

Ans 2: Probe: A probe is a single stranded nucleotide sequence that will hybridize into a certain piece of DNA.

Q2. Give three possible ways to get the gene of interest. Write three methods to get gene of interest.

Ans 1: Gene of interest can be obtained by following methods

Ans 2: i. To isolate it from chromosomes
ii. Make it from mRNA
iii. Synthesize it chemically.

Q3. What are restriction enzymes? Give an example

Ans 1: The restriction enzymes cut down the viral DNA, but does not harm to the bacterial cell. They are called restriction enzymes because they restrict the growth of virus. ECORI is commonly used restriction enzyme.

Q4. Define plasmid. Give its uses.

Ans 1: Plasmid are natural extra chromosomal circular DNA molecules which carry genes for antibiotic resistance and fertility etc. plasmids are used as vector to insert desire gene into bacterial or host cell.

Q5. What are transgenic plants?

Ans 1: Plants having foreign DNA are called transgenic plants.

Q6. What are cumulus cells?

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

Q7. Why urine is preferable vehicle for biotechnology product?

Ans 1: Urine is preferable vehicle for biotechnology products because all the animals in the herd urinate-while only female produce milk. Animals start urinate at birth-females do not produce milk until maturity and it is easier to extract protein from urine than milk.

Q8. Define biotechnology. Name two biotechnology products.

Ans 1: It is a technology in which chemical processes of living organisms can be used for the welfare of mankind. Its products are Insulin, Growth hormones

Q9. What is Anther Culture?

Ans 1: Anther culture is a technique in which mature anthers are cultured in a medium containing vitamins and growth regulators. Anther culture is a direct way to produce plants that express recessive alleles. If the recessive alleles govern desirable traits, the plants have these traits.

Q10. How gene therapy is carried out?

Ans 1: Gene therapy is the addition of new genes to a patient's cells to replace missing or malfunctioning genes. Researchers typically do this using a virus to carry the genetic cargo into cells, because that's what viruses evolved to do with their own genetic material.
