Biology - 12th Class Biology Chapter 23 Short Questions Preparation

Q1. What do you know about recombinant DNA technology?

Ans 1: In DNA recombinant technology the DNA of one organism can be entered in to another organism.Thus recombinant DNA technology can be used to make many biotechnology products and can be used for the treatment of many genetic diseases and to improve the traits of many plant and animal species.

Q2. 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.

Q3. How cancer patient are being treated by gene therapy?

Ans 1: Gene therapy is also being done to cancer patient,which make them more tolerant of chemotherapy.In clinical trials researchers have given genes to cancer patient that either make healthy cells more tolerant of chemotherapy or make tumors more vulnerable to it.Once the bone marrow stem cells were protected it was possible to increase the level of chemotherapy to kill the cancer cells.

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. plamids are used as vector to insert desire gene into bacterial or host cell.

Q5. Define genomic library,how it can be made?

Ans 1: A genomic library is a collection of bacterial or bacteriophage clones,each containing a particular segment of DNA from the source cell.
For making genomic library,an organism's DNA is simply sliced up into pieces and pieces are put in to vectors that are taken up by the host bacteria.The entire collection of bacterial or bacteriophage clones that result contains all the genes of that organisms.

Q6. What is meant by totipotent?

Ans 1: Plant cell is said to be totipotent because a single cell has full genetic information for the development of a single plant from a single cell.

Q7. Define Transgenic Plants.Give its two uses.

Ans 1: Plants having foreign genes incorporated into their cells are known as transgenic plants.Two uses of transgenic plant are:

Ans 2: i) A weed called mouse-eared cress has been engineered to produce a biodegradable plastic in cell grannules.
ii) Plants are being engineered to produce human hormones,clotting factors and antibodies in their seeds.

Q8. Define genomic library.

Ans 1: A genomic library is a collection of bacterial or bacteriophage clones,each clone containing a particular segment of DNA from the source cell.

Q9. What is gene pharming?

Ans 1: Gene pharming is a technology that scientists use to alter an animal's own DNA,or to splice in new DNA,called a transgene,from another species.In pharming these genetically modified animals are used mostly to make human proteins that have medicinal value.

Q10. What are transgenic Bacteria?

Ans 1: Bacteria that have a foreign gene inserted into their bodies are termed as transgenic bacteria.
