

Biology (New Book) - 10th Class Biology English Medium Chapter 17 Preparation

Q1. Define biotechnology.

Ans 1: The branch of biology which deals with study of use of living organisms in processes for manufacture of useful products or for services.

Q2. What is fermentation?

Ans 1: Fermentation is the process in which there is incomplete oxidation reduction of glucose fermentation has been in the knowledge of mansicne centuries, but it was believed that it is purely a chemical process.

Q3. How insulin is synthesized commercially ?

Ans 1: Human insulin genes was transferred into bacteria . The genetically modified bacteria become able to synthesise insulin . Diabetics are now receiving this insulin

Q4. What is genetic engineering ?

Ans 1: Genetic engineering i-e artificial synthesis , modification ,removal , addition and repair of the genetic material (DNA) are considered as modern biotechnology . It is done to alter the characteristics of organisms

Q5. What is fermentation ?

Ans 1: Fermentation is the process in which there is incomplete oxidation -reduction of glucose . Fermentation has been in the knowledge of man since centuries , but it was believed that it is purely a chemical process

Q6. Define transgenic organism .

Ans 1: Transgenic organisms with modified genetic set-up are called transgenic , organisms

Q7. What are advantages of fermentess ?

Ans 1: 1: Fermenter provides monitored and controlled environment organisms
2: It optimizes the growth of organisms by controlling many factors like nutrients , oxygen , growth inhibitor , pH , temperature etc
3: It may hold several thousand liters of growth medium
4: Massive amounts of medicine i-e insulin , human growth hormone etc

Q8. Name any two industrial products made by fermentation.

Ans 1: Cereal products , Dairy products.

Q9. Give three objectives of genetic engineering ?

Ans 1: The important objectives of genetic engineering are as follows
1: Production of particular RNA and protein molecules
2: Production of various of plants having particular desirable characteristics
3: Treatment of genetic defects in higher organisms

Q10. How would you define fermentation with reference to biotechnology?

Ans 1: In biotechnology fermentation means the production of any product by the mass culture of micro organisms is called fermentation.
