

## Biology - 10th Class Biology English Medium Chapter 17 Preparation

Q1. Name any two industrial products made by fermentation.

**Ans 1:** Cereal products , Diary products.

Q2. In biotechnology , What is meant by genetically modified organism .(GNO) How is it made ?

**Ans 1:** GMO are provided suitable culture medium for growth to give as much copies of the genes of interest as needed

Q3. What is lactic acid fermentation?

**Ans 1:** The process of fermentation in which pyruvic acid is reduced to lactic acid. It is carried out by streptococcus, lactobacillus species.

Q4. What is genetic engineering?

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

Q5. Give three objects of genetic engineering.

**Ans 1:** i. Production of particular RNA and protein molecules.  
ii. production of varieties of plants having particular desirable characteristics.  
iii. Treatment of genetic defects in higher organisms.

Q6. 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.

Q7. How Insulin is synthesized commercially?

**Ans 1:** Human insulin gene was transferred into bacteria. The genetically modified bacteria became able to synthesize insulin. Diabetics are now receiving this insulin.

Q8. Define transgenic organism .

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

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Q9. What is carbohydrates fermentation?

**Ans 1:** The initial steps of carbohydrate fermentation are identical to those of respiration. The process begins with glycolysis, in which the glucose, molecule is broken into two molecules of pyruvic acid.

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Q10. How insulin is synthesized commercially ?

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