

Text n°3

Methods of biotechnology can be used for many practical purposes. They are used widely in both medicine and agriculture.

In medicine, in addition to gene therapy for genetic disorders, biotechnology can be used to transform bacteria so they are able to make human proteins. Proteins made by the bacteria are injected into people who cannot produce them because of mutations. Bacteria can be genetically engineered to produce a human protein, such as a cytokine (cytokine is a small protein that helps fight infections).

Insulin was the first human protein to be produced in this way. Insulin helps cells take up glucose from the blood. People with type 1 diabetes have a mutation in the gene that normally codes for insulin. Without insulin, their blood glucose rises to harmfully high levels. At present, the only treatment for type 1 diabetes is the injection of insulin from outside sources. Until recently, there was no known way to make insulin outside the human body. The problem was solved by gene cloning. The human insulin gene was cloned and used to transform bacterial cells, which could then produce large quantities of human insulin.

We know that, thanks to our DNA, each of us is a little bit different. Some of those differences are obvious, like eye and hair color. Others are not so obvious, like how our bodies react to medication. Researchers are beginning to look at how to tailor medical treatments to our genetic profiles, in a relatively new field called pharmacogenomics.

In Agriculture, biotechnology has been used to create transgenic crops. Transgenic crops are genetically modified with new genes that code for traits useful to humans. Transgenic crops have been created with a variety of different traits, such as yielding more food, tasting better, surviving drought, and resisting insect pests. Scientists have even created a transgenic purple tomato that contains a cancer-fighting compound and others that have high levels of antioxidants.

Biotechnology has also had tremendous impacts in the forensic sciences. Where the DNA analysis is used to solve crimes.

Questions :

Part one : Read the text and answer the questions

- 1-Give a title to the text.
- 2-Give five keywords for the text.
- 3-What are transgenic crops?
- 4-Explain how bacteria can be genetically engineered to produce a human protein.

5- Find words from the text which have the same meaning as following:

- Aims
- Disturbance
- Enormous

6- Find words in the text which mean the opposite of the following words :

- Inside
- A lot
- Old

7- Summarize the text in few lines.

Part 2 : Answer the following questions :

1-Give the definition of reading comprehension.

2-Cite the reading Strategies.

3- What is POWER strategy for writing ?