

Introduction to Biotechnology

Chapter 17: Introduction to Biotechnology · Topic 1

Key Concept

Biotechnology applies biological knowledge to create useful products, like using bacteria to produce insulin for diabetes treatment.

In agriculture, biotechnology has led to genetically modified crops with improved resistance to pests, diseases, or environmental conditions.

In medicine, biotechnology has enabled the development of vaccines, antibiotics, and diagnostic tools, improving healthcare significantly.

While biotechnology offers many benefits, it also raises ethical considerations that require careful regulation and public discussion.

Quick Revision Notes

- Biotechnology: uses biology to create products.
- Example: bacteria producing insulin.
- Agriculture: genetically modified crops.
- Improved pest, disease, environment resistance.
- Medicine: vaccines, antibiotics, diagnostics.
- This improved healthcare significantly.
- Biotechnology raises ethical considerations.
- Needs careful regulation, public discussion.

Practice Questions

- 1 Research how insulin is produced using biotechnology.
- 2 Discuss a genetically modified crop and its benefits.
- 3 Research a vaccine developed using biotechnology.
- 4 Discuss an ethical concern about biotechnology.
- 5 Discuss why regulation of biotechnology matters.
- 6 Explain biotechnology in your own words.