

Cell Biology and Biotechnology

Chapter 18: Cell Biology and Biotechnology · Topic 1

Key Concept

Cells contain organelles like the nucleus, mitochondria, and ribosomes, each performing specific functions essential for cell survival.

Cell division, through mitosis and meiosis, allows growth, repair, and reproduction, each serving distinct biological purposes.

Biotechnology applies cellular and genetic knowledge to develop products like genetically modified crops, vaccines, and medical treatments.

Understanding cell biology and biotechnology helps us appreciate life's fundamental unit and its applications in medicine and agriculture.

Quick Revision Notes

- Cells: nucleus, mitochondria, ribosomes organelles.
- Each has specific essential functions.
- Cell division: mitosis and meiosis.
- Allows growth, repair, reproduction.
- Biotechnology applies cellular, genetic knowledge.
- Develops GM crops, vaccines, treatments.
- Understanding shows life's fundamental unit.
- Also its medical, agricultural applications.

Practice Questions

- 1 Draw a cell and label its organelles.
- 2 Discuss the difference between mitosis and meiosis.
- 3 Research a biotechnology product like a GM crop.
- 4 Discuss how biotechnology helps medicine.
- 5 Discuss why cell biology is fundamental to life sciences.
- 6 Explain cell biology and biotechnology in your own words.