

Biotechnology Applications Quiz PDF

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Which branch of biotechnology focuses on medical applications?

- Green Biotechnology
- Red Biotechnology
- White Biotechnology
- Blue Biotechnology

What is the primary goal of agricultural biotechnology?

- To develop new marine species
- To increase crop yield and resistance
- To create industrial enzymes
- To monitor environmental health

What are the challenges faced by regulatory bodies in overseeing biotechnology applications?

Which of the following are ethical considerations in biotechnology? (Select all that apply)

- Genetic modification
- Cloning
- Space exploration
- Stem cell research

What are the benefits of using GMOs in agriculture? (Select all that apply)

- Increased crop yield
- Enhanced nutritional content
- Decreased soil fertility
- Resistance to pests

Which regulatory aspect is crucial in biotechnology applications?

- Marketing strategies
- Safety protocols
- Public relations
- Financial investments

What is the focus of blue biotechnology?

- Industrial processes
- Marine and aquatic applications
- Agricultural improvements
- Medical advancements

Which technology is commonly used for gene editing in biotechnology?

- PCR
- CRISPR-Cas9
- Gel Electrophoresis
- ELISA

What are potential future trends in biotechnology? (Select all that apply)

- Synthetic biology
- Nanobiotechnology
- Traditional farming
- Biotechnology in space

Which of the following is a product of industrial biotechnology?

- Golden Rice
- Monoclonal antibodies
- Biofuels
- Diagnostic tests

Discuss the ethical implications of using genetically modified organisms (GMOs) in agriculture.

What is the role of biopesticides in agriculture?

- To increase soil fertility
- To control pests using natural organisms
- To enhance crop nutritional content
- To monitor environmental health

What is the main application of bioplastics?

- To enhance crop nutrition
- To create biodegradable plastics
- To monitor pollution
- To develop vaccines

Explain how CRISPR-Cas9 technology has revolutionized genetic engineering.

Predict how advancements in synthetic biology might impact future biotechnology applications.

Which technologies are used in industrial biotechnology? (Select all that apply)

- Fermentation technology
- CRISPR-Cas9
- Enzyme technology
- Monoclonal antibodies

Describe the role of biotechnology in the development of personalized medicine.

How does biotechnology contribute to environmental sustainability? Provide examples.

Which of the following are applications of genetic engineering in medical biotechnology? (Select all that apply)

- Gene therapy
- Vaccine development
- Biodegradable plastics

Biopesticides

What are some applications of environmental biotechnology? (Select all that apply)

- Biodegradation of pollutants
- Development of biopharmaceuticals
- Oil spill clean-ups
- Personalized medicine