

Recombinant DNA Technology Quiz PDF

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Which application of recombinant DNA technology involves the production of insulin?

- Agriculture
- Medicine
- Environmental science
- Forensic science

What are the key components required for PCR? (Select all that apply)

- DNA template
- RNA primer
- DNA polymerase
- Nucleotides

Which enzyme is responsible for cutting DNA at specific sequences?

- DNA polymerase
- RNA polymerase
- Restriction enzyme
- DNA ligase

What is the primary purpose of recombinant DNA technology?

- To create synthetic life forms
- To combine DNA from different sources
- To sequence genomes
- To destroy harmful genes

Which of the following are vectors used in recombinant DNA technology? (Select all that apply)

- Plasmids
- Bacteriophages

- Ribosomes
- Cosmids

What are the potential benefits of genetically modified crops? (Select all that apply)

- Increased crop yield
- Enhanced nutritional content
- Reduced pesticide use
- Higher water consumption

What is the role of DNA ligase in recombinant DNA technology?

- To cut DNA
- To amplify DNA
- To join DNA fragments
- To degrade DNA

Which of the following is commonly used as a vector in genetic engineering?

- Ribosome
- Plasmid
- mitochondria
- Golgi apparatus

Which agency is primarily responsible for regulating genetically modified organisms in the United States?

- NASA
- FDA
- EPA
- CDC

Which of the following are applications of recombinant DNA technology? (Select all that apply)

- Development of vaccines
- Creation of GMOs
- Climate change mitigation
- Gene therapy

What are some ethical concerns related to recombinant DNA technology? (Select all that apply)

- Impact on biodiversity
- Accessibility of technology
- Human cloning
- Economic benefits

What is the first step in the process of gene cloning?

- DNA sequencing
- Transformation
- Isolation of the gene of interest
- Protein synthesis

Which historical milestones are associated with recombinant DNA technology? (Select all that apply)

- Discovery of restriction enzymes
- Development of CRISPR technology
- Creation of the first recombinant DNA molecule
- Invention of the electron microscope

What is a major ethical concern associated with recombinant DNA technology?

- Cost of research
- Complexity of techniques
- Genetic modification of organisms
- Availability of equipment