

Quiz Questions

1. What is one of the benefits of DNA sequencing?

1. A) It can be used to create biological weapons
2. B) It allows healthcare providers to customize treatments for patients with precision medicine and conduct genetic testing
3. C) It has no security implications
4. D) It is only useful for tracking the spread of diseases

Answer: B

2. What is an example of a technology used in fourth generation sequencing?

1. A) Advanced microimaging and next-generation sequencing to define tissue heterogeneity
2. B) Single molecules of DNA were directly sequenced without an amplification step
3. C) Nanopore-based technologies enable entire genomes to be read in a non-destructive manner
4. D) Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR)

Answer: A

3. What is CRISPR?

1. A) A technology used to sequence entire genomes in a non-destructive manner
2. B) Clustered Regularly Interspaced Short Palindromic Repeats, or a methodology that allows the simple and precise alteration of DNA
3. C) A type of virus that can be created using DNA sequencing
4. D) A type of genetic testing

Answer: B

4. What is one of the potential security implications of DNA sequencing?

1. A) The generation of powerful new strains of viruses, with increased transmissibility and virulence
2. B) It has no security implications
3. C) It can be used to create biological weapons
4. D) It is only useful for tracking the spread of diseases

Answer: A

5. What was ushered in in 2013?

1. A) Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR)
2. B) Fourth generation sequencing
3. C) The widespread use of DNA sequencing for tracking the spread of diseases
4. D) Single molecules of DNA were directly sequenced without an amplification step

Answer: A