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Assignments

Assignment 12

The deadline for submitting this assignment has passed.

You have scored out of

3

1. Match the following items:

(a) The alignment B (BRM algorithm) with path (x, y) to the two sequences.

(b) The value of B (BRM algorithm) with path (x, y).

2. Which of the following statements are true/false?

(a) The Needleman–Wunsch algorithm finds the optimal local alignment.

(b) The Smith–Waterman algorithm finds the global alignment.

3. Given a DNA sequence and an amino acid sequence, explain

(a) How to perform an BLAST search.

(b) How to interpret the BLAST results.

4. Describe the difference between DNA and RNA.

5. Discuss the significance of homology modeling in structural biology.


7. Define the terms:

(a) Sequence similarity

(b) Homology

8. Explain the concept of hidden Markov models (HMMs) and their applications.

9. Discuss the role of machine learning in bioinformatics.

10. Describe the process of protein structure prediction.

11. Explain the importance of metabolic pathways.

12. Discuss the impact ofomics technologies on biological research.

Submission Guidelines

1. Submit your assignment through the course portal.

2. Ensure all files are in the specified format.

3. Submit before the deadline.

4. Follow any additional instructions provided by the instructor.

Feedback

You have completed the assignment.

Feedback on your submission:

(a) Your alignment accuracy is

(b) Your score on the technical questions is

(c) Your score on the conceptual questions is

Overall, your performance is

Suggestions for improvement:

1. Improve your alignment accuracy by

2. Enhance your understanding of

3. Practice more problems related to

Thank you for your efforts.

Instructor