

2005 Paper 9 Question 9

Bioinformatics

- (a) Present the aim of phylogeny algorithms:
- (i) Describe the main differences between Parsimony, Distance and Likelihood-based algorithms. [5 marks]
 - (ii) Describe the input and the output of a distance-based algorithm. [5 marks]
 - (iii) Discuss the complexity of the Neighbour-Joining algorithm. [5 marks]
- (b) Describe with one example the Needleman–Wunsch algorithm. [5 marks]