

166.221 Bioinformatics for Biomedical Engineers_ Exam Bioinformatics 12.12.19

10 Questions;120 Minutes, per question 10 points

Variations of test, so not everybody got the same.

- 1) Shotgun in Metagenomics
- 2) Applications of bioinformatics in science (name 5 with examples, bullet points)
- 3) Which problem may exist when we automatically annotate a genome?
- 4) What is the law of parsimony?
- 5) Why is "JC69" considered to be the most constrained model of evolution?
- 6) DNA sequencing. Why and what kind of information you get.
- 7) Charles Darwin was a_____. Describe his mayor thesis.
- 8) Multiple choice: What percentage of identical residues is the threshold for considering two sequences of proteins homologous if the sequence length is 35. (15 % /40 % /80 % /100 %)
- 9) Multiple choice: types of sequence search modes (BLASTA...)
- 10) Genome sequencing strategies (sequencing DNA, step by step)