

# Assignment 5 BioInformatics

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November 2022

## 1 Point 1

### Question

Terminology review: differentiate DNA, gene, and genome. Your explanation must demonstrate that you clearly understand what each term means distinctively of the others. (max. 150 words).

### Answer

## 2 Point 2

Briefly describe gene prediction and why we do it. (max. 150 words)

### Answer

## 3 Point 3

Describe and differentiate the three main classifications of gene prediction programs: ab initio based, homology based, and consensus based. (max. 150 words)

### Answer

## 4 point 4

In gene prediction, discuss the characteristics in a DNA sequence that have been statistically shown to point to or act as a kind of marker or clue signifying a coding region, i.e., genes/exons (max. 150 words).

**Answer**

**5 Point 5**

Why do you think that gene prediction is a difficult task? (max. 300 words)

**Answer**

ciao