

Write to each of your answering sheets

- course name, date, number of the sheet / total number of the sheets
- family name, given name, student id, signature

You can write your answer either in english or in finnish.

1. Biological high throughput measurements and their applications in 2020.
(1 page essay in science fiction style, originality is rewarded). 5p
2. Define DNA microarrays. Explain shortly how they exploit hybridisation and fluorescence and what DNA microarrays can be used for. 5p
3. Explain the benefits and drawbacks of automated image analysis compared to manual analysis (in case of cell image analysis). 5p
4. What kind on biological questions can be studied using unsupervised data analysis? 5p