

166.201 Biology,
Group B

Example exam
Time 90 min

Name:

Matriculation number:

Index number:

Weighing: (10 points per question, 100-88 S1, 87-75 G2, 74-62 B3, 61-50 G4, 49-0 N5)

1. Explain the gene theory?
2. Explain the four levels of protein structure; which structure determines the function of a protein?
3. Describe the central dogma of molecular biology?
4. Name five different organelles of a eukaryotic cell and briefly describe the function of each.
5. Compare a plant cell with an animal cell according to the cytology; name the major commons and differences?
6. What does X-linked (sex-linked) inheritance mean, give a typical example for human beings?
7. On what is the Baltimore classification of viruses based on; give an example?
8. What is a transposon; give a human example and its impact?
9. Red Biotechnology:
 - a) To what application field is this term related?
 - b) What relevance has Red Biotechnology within all biotechnological application fields (minor, middle or major)?
 - c) Mention 3 products/types of Red Biotechnology applications (except antibiotics).
 - d) Penicillin: Name the production microorganism.
Explain the mode of action shortly.
Why are half-synthetic penicillins used?
10. List the major determinants contributing to the toxicity of a substance and describe very shortly (a few words)