

Rak-11.3000 Bridges, General Course

Examination 10.12.2010

Write down to your answer sheet(s) surname; first name; student ID

Each question is scored with points 0-5. Minimum 10 points is required to pass the examination.

1. In preliminary design phase, explain the main factors that the bridge designer must take account when selecting suitable bridge type for a given bridge building site ordered by the client.
2. Explain the abbreviations of SLS and ULS assessments of bridge superstructures. Give some examples what these concepts mean when dimensioning concrete and steel decks.
3. Explain the role of general drawings (or main drawings) in bridge design process. Why they are needed and list the objects and measures must be included in these drawings?
4. Explain how a decision maker can objectively compare
 - a) construction costs and
 - b) LCC costs
 of different bridge proposals. What kind of characteristic values he can get from available tools when comparing the costs of the bridges.
5. Explain the results in the figure obtained by applying BridgeLCA tool for three bridges:

