

## **Fundamentals of Structures 2018**

### **Questions for preparation for test 2**

#### **Construction site visit**

1. Formulate minimum three statements concerning your observations made during the construction site visit you consider important! If you were not present, formulate your opinion based on the short description of the visit which was placed on the homepage!

#### **Modelling and analysing structures**

2. What are main components of the static model?
3. What is an external joint of a structure? (Why is it called external joint?)
4. Why do we need the static model of loadbearing structures? For what purpose do we use it?
5. How do we simplify structural members, when constructing the static model of the structure?
6. What kind of joints of coplanar structures consisting of linear members do you know?
7. Sketch the static model of a simple supported arch!
8. What is the name of the given static model?
9. What are the main steps (phases) of design of loadbearing structures?
10. What are the fundamental laws of structural analysis?
11. Sketch the static model of a cantilever loaded by uniformly distributed load!
12. Sketch the static model of a simple supported beam loaded by concentrated force at mid-span!
13. What is span? Give also the unit of it!

#### **Responses of loadbearing structures**

14. What are responses of loadbearing structures when being loaded?
15. What is normal stress? Give also the unit of it!
16. What is shear stress? Give also its unit!
17. What is normal force? Give also its unit!
18. What is shear force? Give also its unit!
19. What is distortion? Give also its unit!
20. Is cracking a response of (reinforced concrete) structures when loaded? What kind of stress may produce cracking? Why is cracking a problem, that is to be limited?
21. What is an internal force! What different internal forces do you know?

#### **Process of creation, construction, functioning and demolition**

22. What are different means of protection of the natural and built environment?
23. What is general development project (GDP) and who are participating in the elaboration of it?
24. What is the role of the client in the process of building investments?
25. What is the role of the general management company in the process of building investments?
26. Different members participating in preparation of the building permission project!
27. What different authorities are intervening in authorization of the building permission project?
28. Who is the building's manager (or project manager)?
29. What is the difference between the general manager and the building's manager?
30. What is responsible the general contractor company for, during the realization of the building?
31. Give the name of some subcontractors which may be contracted by the general contractor company for different execution activities! (Name at least four!)
32. Give different reasons of why the decision of demolishing a building used to be taken.