
CVG 2141 – CIVIL ENGINEERING MATERIALS

Quiz VI

Dr. Leandro F. M. Sanchez

Deadline: **November 9th 2020**

- 1. Why does concrete require suitable mechanical properties?**
- 2. What are the main parameters that influence the compressive strength of concrete?**
- 3. What's the modulus of elasticity of concrete? How do we measure it?**
- 4. Does concrete have a proper tensile strength? Why? What are the test procedures used to measure tensile strength of concrete in the laboratory? How do one use the tensile strength of concrete to design structures?**
- 5. What's sulphate attack? What are the distinct types of sulphate attack? What should be done to avoid sulphate attack in concrete?**
- 6. What's Alkali-Aggregate Reaction (AAR)? Show the essential parameters for this chemical mechanism. How do one avoid and or mitigate AAR in concrete?**
- 7. What's freezing and thawing in concrete? How can we avoid it?**
- 8. What's the corrosion process in reinforced concrete. What are the most common mechanisms that may trigger corrosion (describe them)? How can we avoid corrosion?**