ENDS 231. Study Guide for Quiz 10

This guide is not providing “answers” for the conceptual questions. It is a list of topical concepts and their application you should be familiar with. It is an aid to help prepare for the quiz.

**Covers material of Lectures 23 & 24**

- Stability
- Buckling
- Slenderness
- Critical Buckling and Euler’s Formula
- Effective length, K & bracing
- Beam-columns
- Combined bending and compression - *interaction*
- P-Δ effect
- Eccentricity
- Kern
- Lumber vs. engineered timber characteristics
- Various strengths (directionality, wood type, etc.)
- Design methodology and obtaining allowed stress (like with load duration factor...)
- Column stability factor, $F_{CE}$ & l/d
- Connection stresses
- Nominal dimensions of timber
- Design vs. analysis
- Slenderness criteria & l/r
- *with respect to least radius of gyration*
- Compact section criteria
- Allowable Stress Design
- Load and Resistance Factor Design
- Factored loads
- Resistance Factors
- “Design” values vs. “Capacity”
- Design vs. analysis