

## ARCH 614. Study Guide for Quiz 4

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.

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### Covers material of Lectures 8 & 9

- Composite shape
- Centroid, moment of inertia,  $Q$ , radius of gyration
- Negative area method
- Parallel axis theorem
- Neutral axis, section modulus,  $Q$ , extreme fiber
- Stiffness (relative to  $EI/L$  through  $\Delta$ )
- Maximum bending stress (& location along length and in cross section)
- Maximum shear stress (& location along length and in cross section)
- Maximum shear stress by beam shape (proper equations)
- Shear flow and shear center
- Connected area
- Nail capacity and pitch for resisting longitudinal shear