

>>> Chapter 2 Quiz for *Foundations of Engineering* <<<

>>> Solutions <<<

This is a short answer quiz. Please put your answers in the designated answer areas. The quiz questions for the quizzes in the three sections of *Foundations* that I teach are largely different. I will “norm” the quiz scores at the end of the semester to account for any differences between the sections. The questions from this quiz come from the lecture and the book (chapter 2). Each problem is worth 12 points (4 points are for free).

This quiz is open notes, but not open book. Your notes may not contain photocopies (or scans or anything similar) of anything. That is, the notes must be handwritten. You have 15 minutes. Later quizzes will be more difficult and longer than this one!

1) Answer “what is engineering” in one sentence **“Engineering is the application of science to the common purpose of life” (Count Rumsford)**

2) The engineering process starts with **NEEDS or REQUIREMENTS**

3) List five of the top-twenty 20th century greatest engineering achievements **Electrification, Radio and Television, Automobile, Computers, Telephone (others... see <http://www.greatestachievements.org>).**

4) List the five “classic” engineering disciplines **Civil, Mechanical, Electrical, Chemical, and Industrial**

5) Which engineering discipline is often the “King” or “Queen” of the college **Electrical**

6) List three specialties of Civil Engineering **structural, transportation, environmental (also Water resources, geotechnical, surveying, and construction)**

7) If Civil Engineering is lightly stated as “Anything that you stand in or on”, then Mechanical Engineering is “Anything that moves or **get hot**”.

8) Give an argument for a generalized (not specialized) engineering education **A generalized education best prepares you for a long career where you will work in many specialties. The general education best lets you “hop” between specialties. Also, a given specialty may disappear before you graduate or during your career.**