Soils 201 - Study Questions – Introduction and terms (Ch. 1)

Use these questions along with your notes and text book. (And remember that the Exploratory Session material IS part of the class and will be covered on the exams as well.) The questions below may not be totally comprehensive, but are meant to have you recognize the most important material in this section of the class. These questions are guides, only. Exam question will not necessarily be taken from this list.

1) What are the different functions soil, and what are examples of activities (human or otherwise) that make use of each of these functions?

2) What are the 'constiuents' of soil? (That is, what are soils composed of?)

3) What proportion of a soil's volume, on average, is pore space? What are typical ranges of organic matter in mineral soils?

4) What is the USDA definition for each of the following particle sizes: sand, silt, clay.

5) What are the relative characteristics of the different particle size classes (e.g., visibility to the eye, dominant types of minerals, chemical activity (attraction for water, chemicals, each other, etc.)

6) What does the term 'colloid' mean, and which soil constituents can be colloids?

7) Explain why clay particles are relatively more interactive (chemically and physically) than a similar mass of sand particles would be.

8) What does *soil texture* mean? What are some of the different USDA texture classes? (You do not need to memorize all the size class, nor the borders between classes! Just have a general understanding, and be able to use the soil texture triangle.)

9) What is soil organic matter (often abbreviated OM or SOM) composed of? How do you define SOM?

10) What is *humus*?

11) What functions does SOM have in the soil, and why do we pay so much attention to it?

12) What is contained in the soil solution (that is, dissolved in the soil water)?

13) What does the term *soil structure* mean?

(The text has more info on soil pH – which we will talk about in detail later in the term. However, if the concept of "pH " is new to you, make sure to read this section of Ch. 1 carefully so you have the basic background to understand mention of pH in class until that time. Likewise for soil fertility and plant nutrient section of this chapter.)

Other terms you should understand from this section:

Soil profile,

pedon

polypedon

Horizon

Solum

Saprolite, regolith