

**Quiz #1: Formative Soil Formation, Erosion, Composition and Properties****Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- \_\_\_\_\_ 1. We lose 5 to 7 million ha(hectare) of productive cropland per year to \_\_\_\_\_.
- abandonment, feralization, and other factors
  - recreational use and other factors
  - erosion, overirrigation, and other factors
  - forest replanting and other factors
- \_\_\_\_\_ 2. Students want to determine the impact of soil erosion from the development of new housing. They plan to measure the density of a species of algae growing along the bottom of a river that flows through their town. The town is built in a heavily forested area, but a large area of trees along the river was recently clear-cut to allow for the construction of a new housing development, which has caused exposed soil to wash into the river. The river flows north to south through the town and is still forested both up- and downstream of the town.

Which of the following would be the best control sample for the study?

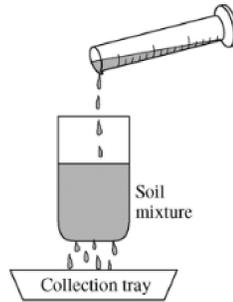
- A sample of water collected just downstream of the southern forest
  - A sample of water collected just downstream of the housing development
  - A sample of water collected just downstream of the northern forest
  - A sample of distilled water
- \_\_\_\_\_ 3. pH influences \_\_\_\_\_.
- the number of soil horizons
  - soil clumpiness
  - erosion
  - plant growth
- \_\_\_\_\_ 4. Students sampled several different gardens near their school and measured the percentages of silt, sand, clay, and humus content present in each sample. Their results are shown in the table below.

Sample	Percent Component in Sample			
	Percent Silt	Percent Sand	Percent Clay	Percent Humus
A	30	30	10	30
B	40	10	15	35
C	30	30	10	20
D	20	25	45	5

Based on the data in the table above, which of the following samples would be the most prone to becoming waterlogged?

- Sample A
- Sample B
- Sample C
- Sample D

5. Directions: The following question(s) refer to the diagram below, which shows 100 ml of water being poured through a soil sample. After the water has passed through the soil, 98 ml of water is measured in the collection tray below the sample.



Of the following, which is the most likely composition of the soil sample?

Clay	Silt	Sand
80%	10%	10%

a.

Clay	Silt	Sand
10%	10%	80%

b.

Clay	Silt	Sand
50%	40%	10%

c.

Clay	Silt	Sand
30%	40%	30%

d.

6. The water-holding capacity of soil is LEAST likely to be affected by the addition of which of the following?
- Clay
  - Humus
  - Pesticide
  - Manure

**Quiz #1: Formative Soil Formation, Erosion, Composition and Properties**  
**Answer Section**

**MULTIPLE CHOICE**

- 1. ANS: C                   PTS: 1
- 2. ANS: C                   PTS: 1
- 3. ANS: D                   PTS: 1
- 4. ANS: D

The high percentage of clay makes the sample prone to becoming waterlogged, since its porosity would be low.

- PTS: 1
- 5. ANS: B                   PTS: 1
- 6. ANS: C                   PTS: 1