Below are 5 multiple choice questions. Mark the best answer. Each correct response is worth 3 points.

1. The item below that is not a function of plant roots is
   a) disease suppression.
   b) anchorage.
   c) storage.
   d) absorption.

2. The zone of the plant root that is important for calcium uptake is the
   a) root cap.
   b) meristematic zone.
   c) zone of elongation.
   d) zone of maturation.

3. The rhizosphere is high in microbial activity because
   a) it is warmer than the surrounding soil.
   b) it contains more carbon than the surrounding soil.
   c) it contains more moisture than the surrounding soil.
   d) it is less compacted than the surrounding soil.

4. The bulk density of an ideal soil for crop production is
   a) 1.3 g/cm³.
   b) 1.9 g/cm³.
   c) 2.3 g/cm³.
   d) 2.6 g/cm³.

5. The Law of the Minimum was proposed by
   a) Liebig.
   b) Mitscherlich.
   c) Bray.

Please briefly answer each of the following questions.

6. Please define soil tilth. (5 points)
7. Why is it advantageous for plants to develop root hairs? (5 points)

8. Briefly explain the difference between soil texture and soil structure. (5 points)

9. Why is development of soil structure important for good plant growth? (5 points)

10. How does the presence of plant residue on the surface of soils help prevent erosion? (5 points)

11. Why are we interested in managing soil fertility? (2 points)
12. Please list two of the factors that cause structure to form in soil. (2 points)

13. What stabilizes soil structure? (4 points)