

**NATIONAL UNIVERSITY OF LESOTHO**  
**B.Sc.SUPPLEMENTARY EXAMINATIONS**  
**PG.246 INTRODUCTION TO SOIL SCIENCE**

**DECEMBER 2009**

**MARKS: 100**

**TIME: 3 HOURS**

**INSTRUCTIONS: Answer FOUR (4) questions. Where possible illustrate your answer with equations/diagrams.**

1. Hydrolysis and carbonation are examples of chemical weathering. Use these two processes as examples to discuss the chemical weathering process. **(25)**
  
2. Discuss soil tillage and its influence in crop Production. **(25)**
  
3. Saturated flow and unsaturated flow are two of the ways by which moisture moves through the soil in non-saline soils. Discuss. **(25)**
  
4. Discuss the impact of soil texture in crop production. **(25)**
  
5. Cation exchange capacity and percent base saturation are important characteristics of soil. Discuss. **(25)**
  
6. Discuss the importance of soil organic matter in crop production. **(25)**