



The Open University of Sri Lanka  
 Faculty of Engineering Technology  
 Department of Agricultural & Plantation Engineering

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| Study Programme              | : Bachelor of Industrial Studies (Agriculture)    |
| Name of the Examination      | : Final Examination                               |
| <b>Course Code and Title</b> | <b>: AGI3535 Land and Soil Tillage Management</b> |
| Academic Year                | : 2017/18   |
| Date                         | : 14 <sup>th</sup> January 2019                   |
| Time                         | : 0930-1230hrs                                    |
| Duration                     | : <b>3 hours</b>                                  |

### General Instructions

1. Read all instructions carefully before answering the questions.
2. This question paper consists of **Six (6)** questions in **Two (2)** pages.
3. Answer any **Four (4)** questions only. All questions carry equal marks.
4. Answer for each question should commence from a new page.
5. Relevant charts/ codes are provided.
6. Answers should be in clear hand writing.
7. Do not use Red colour pen.

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1. a) Briefly explain the causes for soil compaction.  
 b) Discuss the effects of soil compaction on crop production.
  2. a) Discuss the acid sulfate soil formation.  
 b) Describe the potential impacts of Acid Sulfate Soils.
  3. a) Briefly describe the different soil horizons in a soil profile and their special features.  
 b) Explain the importance of soil colours with regard to its composition.
  4. a) Briefly explain the steps involved in achieving accurate seeding.  
 b) Describe broadcasting techniques of seeding.

5.
  - a) Explain the different operations involved in land preparation.
  - b) Briefly explain the advantages of primary and secondary tillage.
  
6.
  - a) Describe the benefits of land leveling.
  - b) Briefly discuss the Best Management Practices involved in following land management practices.
    - i. Structural practices
    - ii Nutrient management
    - iii Tillage practices
    - iv Waste management