



KERALA AGRICULTURAL UNIVERSITY  
B.Tech.(Ag. Engineering) 2018 Admission  
I Semester Final Examination-January 2019

Sacs. 1104

Principles of soils science (2+0)

Marks: 50  
Time: 2 hours

- I Fill in the blanks:** (10x1=10)
- 1 Granite is an example of \_\_\_\_\_ rock.
  - 2 \_\_\_\_\_ refers to weight of soil particles present in unit volume occupied by soil.
  - 3 \_\_\_\_\_ is the broadest category in Soil Taxonomy.
  - 4 Soils belonging to the order, \_\_\_\_\_ are found mostly in dry climate.
  - 5 \_\_\_\_\_ is the process of entry of water into the soil.
  - 6 Chemical formula of quartz is \_\_\_\_\_.
  - 7 The cation exchange capacity (CEC) of a soil is expressed in the unit of \_\_\_\_\_.
  - 8 The value of bulk density of a soil is \_\_\_\_\_ than its particle density.
  - 9 The dominant clay mineral in Ultisols is \_\_\_\_\_.
  - 10 Soil colour is measured by \_\_\_\_\_ colour chart.
- II Write Short notes on ANY FIVE of the following:** (5x2=10)
- 1 Distinguish between eluviation and illuviation
  - 2 Igneous rocks.
  - 3 Differentiate between prismatic and columnar soil structure
  - 4 What is SAR of an irrigation water?
  - 5 Laterite soils are deficient in available phosphorus. Why?
  - 6 Plasticity of soil.
  - 7 Secondary mineral.
- III Answer ANY FIVE of the following** (5x4=20)
- 1 Decomposition of soil organic matter
  - 2 Distinguish between podsolisation and laterisation
  - 3 Chemical weathering
  - 4 Advantages of liquid fertilizers
  - 5 Parameters to evaluate irrigation water quality
  - 6 Humus
  - 7 Nature of soil acidity
- IV Answer ANY ONE of the following** (1x10=10)
- 1 Role of soil organic matter in soil fertility.
  - 2 Salient features of salt affected soils. How will you reclaim such soils?