



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

V **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?