



KERALA AGRICULTURAL UNIVERSITY
B.Sc. (Hons.) Ag. 2018 Admission
I Semester Final Examination-February-2019

Ssac.1102

Fundamentals of Soil Science (2+1)

Marks: 50
Time: 2 hours

I Fill in the blanks (10x1=10)

- 1 Inprocess of soil formation, accumulation of sesquioxides occurs.
- 2 Rocks formed in the earth crust due to the solidification of molten magma is
- 3 Ferromagnesian mineral is
- 4 According to Moh scale, hardness of diamond is
- 5 The red colour in soils is due to the presence of

Match the following

- | A | B |
|------------------------------|--------------------------|
| 6 2:1 expanding clay mineral | a Lakes |
| 7 Igneous Rocks | b Particle size analysis |
| 8 Lacustrine | c Granite |
| 9 Colluvium | d Montmorillonite |
| 10 Stoke's law | e Gravity |

II Write Short notes on any FIVE of the following (5x2=10)

- 1 Soil bulk density
- 2 Munsell colour chart
- 3 Cation exchange
- 4 Soil p^H
- 5 Matric potential
- 6 Define soil.
- 7 Regolith

III Answer any FIVE of the following. (5x4=20)

- 1 Classification of 2:1 clay mineral and their properties.
- 2 Importance of soil temperature.
- 3 Geological time scale.
- 4 Soil moisture constants.
- 5 Different types of rocks with examples.
- 6 Weathering and physical weathering.
- 7 Effect of soil p^H on nutrient availability.

IV Write an essay on any ONE of the following (1x10=10)

- 1 Fundamental and specific soil forming processes.
- 2 Ion exchange reactions in soil, origin of charges on soil colloids and influence of ion exchange on soil fertility.
