



**KERALA AGRICULTURAL UNIVERSITY**  
**B.Sc.(Hons) Forestry 2017 Admission**  
**II Semester Final Examination-August 2018**

Bass.1207

**Geology and Soils (1+1)**

**Marks: 50**  
**Time:2 hours**

- I A Fill in the Blanks** **(10x1=10)**
- 1 The term pH was coined by .....
  - 2 Ion responsible for deflocculation is .....
  - 3 The soil with pH <8.5, ESP <15 and EC >4 dS m<sup>-1</sup> is .....
- B State true or false**
- 4 CEC of montmorillonite ranges from 80-100 C mol (P<sup>+</sup>) kg<sup>-1</sup>
  - 5 Soil containing high amount of silica generally impart brown colour to soil
- C Define**
- 6 Geology
  - 7 Weathering
  - 8 Percolation
  - 9 Soil
  - 10 Expand SPAC
- II Write Short notes on any FIVE of the following** **(5x2=10)**
- 1 Important soil forming processes in nature.
  - 2 Differentiate between illuviation and eluviation.
  - 3 Differentiate between solum and regolith.
  - 4 Primary minerals.
  - 5 Fractions of organic matter
  - 6 Differentiate between flocculation and deflocculation
  - 7 Sedimentary rocks.
- III Answer any FIVE of the following.** **(5x4=20)**
- 1 Importance of soil temperature on plant growth
  - 2 What is C:N ratio? What are the practical implication of C:N ratio on soil fertility
  - 3 Comment on 2:1 clay minerals with examples
  - 4 Factors affecting bulk density.
  - 5 Soil colour and its significance
  - 6 Differentiate between saturated and unsaturated flow of water
  - 7 Comment on pH dependent and pH independent charges on soil colloids
- IV Write an essay on any ONE of the following** **(1x10=10)**
- 1 Different types of weathering of rocks and the factors affecting weathering.
  - 2 Stoke's law - its limitations and assumption.

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