

M.Sc.(Ag.) Semester – I Examination, 2014

Soil Science and Agricultural Chemistry

Course : SSC – 504

(Soil Mineralogy, Genesis, classification and Survey)

Time: 3 Hours

Full Marks: 50

Questions are of value as indicated in the margin.

Answer **any five** questions

1. Draw the structure of a dioctahedral and a trioctahedral layer. Compare the properties of Montmorillonite and vermiculite. Why is fine grain mica non expanding? 2+7+1=10
 2. Mention active and passive factors of soil formation. Describe two major soil farming processes. 2+8=10
 3. How soil survey is carried out? What do you mean by soil map and soil survey report? 8+2=10
 4. Describe two soil orders with special reference to their formation, distribution, potential and constraints. 10
 5. Briefly describe different types of soil survey. 10
 6. Describe Black (cotton) soils with reference to its occurrence, distribution, potential, constraints and remediation. 10
 7. Write short notes on (**any four**): 2.5×4=10
 - (a) Soil profile
 - (b) Differential Thermal Analysis
 - (c) Amorphous clays in soils
 - (d) Marbut's Morpho-Genetic system of soil classification
 - (e) Soil temperature regime
 8. Differentiate between 2.5×4=10
 - (a) Mollic epipedon and Anthropic epipedon.
 - (b) Calcic and gypsic endopedon
 - (c) Ustic and Xeric soil moisture regime
 - (d) Entisol and Ultisol
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