MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc.(Hons.) Agriculture

Semester	: I (New)	Term	: I	Academic Year	: 2018-19
Course No.	: SSAC 111	Title	: Fundamentals of Soil Science		
Credits	: 3(2+1)				
Day & Date	: Monday, 17.12.2018	Time	: 09.00 to 12.00	Total Marks	: 80

Note : 1. Solve **ANY EIGHT** questions from **SECTION "A"**.
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 a) Define pedology. How is soil a dynamic natural body?

b) Give the classification of rocks as per mode of formation with suitable examples.

Q.2 a) Give the physical properties of minerals and explain any two of them.

b) Enlist the weathering processes. Explain in brief chemical weathering.

Q.3 a) State Jenny's equation (1941) and explain in brief.

b) Define soil profile. Draw a well labeled diagram of soil profile.

Q.4 a) State Stoke's law and give its limitations.

b) Define porosity and differentiate between capillary and non capillary pores.

Q.5 a) Enlist the different types of soil survey. Explain in brief reconnaissance soil survey.

b) Enlist the different soils of India. Give the characteristics of black soil.

Q.6 a) Differentiate between saturated and unsaturated flow of water.

b) Enlist and explain factors affecting soil temperature.

Q.7 a) Explain in brief significance of soil reaction in plant nutrition.

b) Give the general properties of soil colloids.

Q.8 a) Give the composition of plant residues.

b) Explain in brief the heavy metal pollution by pesticide.

Q.9 a) Give the composition of soil air. Explain in brief the factors affecting soil air.

b) Enlist and explain the fundamental soil forming processes.

Q.10 Write short notes (Any Two).

a) Phyllosilicates
b) C:N Ratio
c) Humic substances
d) Acid rain

(P.T.O.)

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