

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION
B.Sc. (Hort.)

Semester	: I (New)	Term	: I	Academic Year	: 2015-16
Course No.	: H/SSAC 111	Title	: Fundamentals of Soil Science		
Credits	: 2(1+1)				
Day & Date	: Saturday, 12.12.2015	Time	: 10.00 to 12.00	Total Marks	: 40

- 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 Give the mineralogical composition of earth crust and soil.
- Q.2 a) What are soil colloids? Enlist their properties.
b) Differentiate between particle density and bulk density.
- Q.3 Define soil texture. Give the classification of soil separates along with their size.
- Q.4 a) State the significance of soil water.
b) Explain the significance of soil pH in nutrient availability.
- Q.5 Define CEC. Explain in brief its importance in agriculture.
- Q.6 a) Explain factors affecting soil structure.
b) Define soil survey. Enlist different types of soil survey.
- Q.7 Give the mathematical formula to calculate percent porosity. Explain factors affecting soil porosity.
- Q.8 a) Enlist fundamental soil forming processes.
b) Define soil taxonomy. Enlist any six soil orders.
- Q.9 Enlist various soil moisture constants and describe in detail any one.
- Q.10 a) Define humus. Enlist properties of humus.
b) What are the characteristics of alkali soil?

SECTION "B"

- Q.11 State True or False.
- 1) Kaolinite is 2:1 type of clay mineral.
 - 2) Gypsum block is used for measurement of soil moisture potential in laboratory.
 - 3) Capillary water is known as available water.
 - 4) AEC stands for anion exchange capacity.
- Q.12 Match the following pairs.

"A"

- 1) pH scale
- 2) Acid soil
- 3) Soil colour
- 4) Sodic soil

"B"

- a) Gypsum
- b) Value
- c) Sorenson
- d) Lime