

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Hons.) Horticulture

Semester : I (New)	Term : I	Academic Year : 2018-19
Course No. : H/SSAC 111	Title : Fundamentals of Soil Science	
Credits : 2(1+1)		
Day & Date : Wednesday, 19.12.2018	Time : 09.00 to 11.00	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 a) Explain soil and state the elemental composition of earth crust (% by weight).
b) List out soil forming process and specify the soil forming factors as per Jenny (1941).
- Q.2 a) What is soil pH? Give its importance in nutrient availability in soil.
b) Give the importance of soil organic matter in soil.
- Q.3 Explain soil consistence and soil colour in detail.
- Q.4 a) Enumerate the difference between particle density and bulk density of soil.
b) Discuss soil air and give its composition.
- Q.5 a) Explain in brief the importance of soil temperature.
b) Define CEC. Explain its importance in agriculture.
- Q.6 a) Define soil texture and classify the soil separates as per international system of classification.
b) State Stoke's Law and explain use of textural triangle in soil texture identification.
- Q.7 a) List out the types of soil colloids. Enlist the properties of soil colloids.
b) State the significance of soil water.
- Q.8 a) Enlist soil orders.
b) Explain in brief land capability classification.
- Q.9 a) What is soil survey? Give the purpose of soil survey.
b) Give the type of soil survey and explain any one.
- Q.10 a) Define soil Biology. Explain in brief the factors affecting soil fungi.
b) Explain formation of saline soil.

(P.T.O.)

SECTION "B"

Q.11. Fill in the blanks.

- 1) CEC denotes _____ of soil.
- 2) The _____ reaction of soil is measured by pH meter.
- 3) The soil air contains major gases viz. Nitrogen, Oxygen and _____.
- 4) In present practice the soil colour is matched with the _____ to identify the soil colour.

Q.12 Match the following pairs.

'A'

- 1) GPS
- 2) Chlorine
- 3) EC
- 4) Sodic soil

'B'

- a) Salt concentration
- b) Na ion is dominant
- c) Remote sensing
- d) Anion

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