

**Total No. of Pages : 02**

**Total No. of Questions : 09**

**B.Sc. Agriculture (2014 & Onwards) (Sem.-1)**

# SOIL SCIENCE-I

**Subject Code : BSAG-104**

**Paper ID : [A3293]**

**Time : 3 Hrs.**

**Max. Marks : 60**

**INSTRUCTION TO CANDIDATES :**

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

## SECTION-A

**Q1 Write short notes on the following :**

- a. Bedrock
- b. Anion exchange Capacity
- c. Bulk density
- d. Percolation
- e. Drainage
- f. Leaching
- g. Micelle
- h. Alluvium
- i. Laterization
- j. Salinization

### SECTION-B

- Q2 Discuss significance of soil types in agriculture.
- Q3 Enlist factors of soil formation and any two in detail.
- Q4 Compare USDA and ISSS particle size for textural classes.
- Q5 In a 45 percent porous soil, the bulk density is 1.52. Calculate the particle density of the soil.
- Q6 Categorize drainage classes of land and explain in detail.

### SECTION-C

- Q7 Derive mathematically Darcy's law showing movement of water under submerged conditions.
- Q8 Define a rock. Discuss the conditions under which different rocks are formed.
- Q9 Discuss the conditions under which saline and sodic soils are formed. Also explain in detail about their reclamation.