

Roll No. 

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Total No. of Pages : 02

Total No. of Questions : 09

B.Sc. Agriculture (2014 &amp; Onwards) (Sem.-7)

**SOIL PHYSICAL AND BIOLOGICAL ENVIRONMENT**

Subject Code : BSAG-CS701

Paper ID : [74828]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS 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) Leaching
- (b) Infiltration
- (c) Movement of water in pores
- (d) Soil Tilth
- (e) Soil organism
- (f) Bulk density
- (g) Percolation
- (h) Drainage
- (i) Eluviation
- (j) C:N ratio

### SECTION-B

- Q2. Explain management techniques to check soil erosion.
- Q3. Discuss infiltration and redistribution of water in soil.
- Q4. Discuss in detail the soil thermal regimes of humid and arid regions.
- Q5. Enlist factors of soil formation and discuss role on any one in detail.
- Q6. Explain different processes which affect soil temperature

### SECTION-C

- Q7. Derive mathematically Darcy's law showing movement of water under submerged conditions.
- Q8.
  - a. Elaborate the role of soil organism in maintenance of ecological balance.
  - b. Explain activities of soil micro-organism in development of soil.
- Q9.
  - a. Explain in detail the factors which affect composition of soil-air.
  - b. Explain Darcy's law in relation to movement of water in soil under saturated conditions.