# Model Question Paper- I

CBCS SCHEME

## First/ Second Semester B.E Degree Examination

## Principles of Soil Science and Agronomy (1BSSA105)

**TIME: 03 Hours** **Max. Marks: 100**

Notes:

1. *Answer any FIVE full questions, choosing at least ONE question from each MODULE*
2. *M: Marks, L: Bloom's level, C: Course outcomes.*

| | | Module - 1 | M | L | C |
|---|---|---|---|---|---|
| Q. 1 | a | Define 'Agro-meteorology' and explain its practical utility. | 10 | 2 | 1 |
| | b | Explain the classification of crops based on their origin with examples. | 10 | 2 | 1 |
| | | **OR** | | | |
| Q. 2 | a | Explain about the composition and structure of atmosphere? | 10 | 2 | 1 |
| | b | List any five national agricultural research institutes in India and briefly describe their contributions. | 10 | 2 | 1 |
| | | **Module – 2** | | | |
| Q. 3 | a | Describe different types of tillage. | 10 | 2 | 2 |
| | b | What is an Integrated Farming System (IFS)? Explain its components and advantages. | 10 | 2 | 2 |
| | | **OR** | | | |
| Q. 4 | a | Explain the methods of sowing and their suitability for different crops. | 10 | 2 | 2 |
| | b | What are the critical growth stages of crops? Explain their importance in crop management. | 10 | 2 | 2 |
| | | **Module – 3** | | | |
| Q. 5 | a | What do you understand by term soil science and differentiate between the surface and subsurface soil? | 10 | 2 | 3 |
| | b | Explain the role of climate, organisms, and time in the weathering process. | 10 | 2 | 3 |
| | | **OR** | | | |
| Q. 6 | a | Explain the classification of rocks with examples. | 10 | 2 | 3 |
| | b | Define soil forming processes and explain its different types. | 10 | 2 | 3 |
| | | **Module – 4** | | | |
| Q. 7 | a | Define Soil air and explain the management of soil air. | 10 | 2 | 4 |
| | b | Define soil temperature. How does it influence plant growth and development? | 10 | 2 | 4 |
| | | **OR** | | | |
| Q. 8 | a | Define soil profile. Explain its different horizons with neat diagram. | 10 | 2 | 4 |
| | b | Explain the classification of soil texture. | 10 | 2 | 4 |
| | | **Module – 5** | | | |
| Q. 9 | a | Explain the factors influencing cation exchange capacity (CEC) of soils. | 10 | 2 | 5 |
| | b | List the essential plant nutrients and classify them based on quantity and function. | 10 | 2 | 5 |
| | | **OR** | | | |
| Q. 10 | a | What is soil organic matter? Describe its uses in improving soil fertility and plant growth. | 10 | 2 | 5 |
| | b | What are acid soils? Discuss their formation and reclamation practices. | 10 | 2 | 5 |