

**B.Sc. Semester-III Examination, 2022-23****BOTANY**[Programme]

Course ID : 31310 Course Code : SP/BOT/304/SEC-1

Course Title : Biofertilizer

Time : 2 Hours

Full Marks : 40

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***UNIT-I**1. Answer any **five** from the following questions:

2×5=10

- Name one symbiotic and one non-symbiotic N<sub>2</sub> fixer.
- What do you mean by stater culture?
- Write two characters of *Rhizobium*.
- Write the full form of PGPR.
- What is carrier based inoculum?
- Name two composting worms.
- Define symbiosis.
- Write two limitations of using bio-fertilizer.

**UNIT-II**2. Answer any **four** from the following questions:

5×4=20

- Write the carrier based inoculum production process of *Azotobacter*. 5
- Describe the use of blue green algae and *Azolla* sp. in agriculture. 5
- What is vermicast? How vermicomposting is helpful in waste management? 1+4
- What is organic fertilizer? Describe the disadvantages of using organic fertilizer in agriculture. 1+4
- What is green manuring? Write the advantages of green manuring. 1+4
- What is bio-composting? How industrial wastes are recycled? 1+4

**UNIT-III**3. Answer any **one** from the following questions:

10×1=10

- Describe the types of mycorrhizal association with suitable examples. How the VAM fungi are isolated from soil? 6+4
- Describe the isolation and mass multiplication procedure of *Rhizobium*. 6+4