

**B.Sc. Semester-VI Examination, 2022-23****BOTANY [Honours]**

Course ID : 61316 Course Code : SH/BOT/603/DSE-3

Course Title : Industrial &amp; Environmental Microbiology

Time : 1 Hour 15 Minutes

Full Marks : 25

*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** of the following questions: 1×5=5
- What is a fermenter?
  - Name one microorganism used in the production of alcohol.
  - What is BOD?
  - What is mycorrhizae?
  - Give example of a bacterium associated with root nodule formation.
  - Name one bacterium associated with starch hydrolysis.
  - What is lyophilization?
  - What is fecal coliform test?

2. Answer any **two** of the following questions: 5×2=10
- Give an account of the industrial application of microorganism. 5
  - Describe the process of screening of microorganisms for casein hydrolysis. 5
  - Describe the process of isolation of bacteria from water. 5
  - Give an account of the diversity of bacteria associated with symbiotic nitrogen fixation.

**UNIT-III**

3. Answer any **one** of the following questions: 10×1=10
- Write short notes on:
    - Pilot scale fermenter
    - Air-lift fermenter 5+5=10
  - What is water pollution? What do you mean by TDS and TOC of water samples? Discuss the role of microorganisms in bioremediation of contaminated soils. 2+2+6=10

\_\_\_\_\_