

U. G. 6th Semester Examination 2022

BOTANY (Honours)

Paper Code : DSE-3

[CBCS]

Full Marks : 25

Time : Two Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer any *five* of the following: 1×5=5
 - (i) Define mycorrhiza.
 - (ii) Give the full form of TDS.
 - (iii) What is solid state fermentation?
 - (iv) What is COD?
 - (v) What is *nif* gene?
 - (vi) Name one citric acid-producing bacterium.
 - (vii) What is a bioreactor?
 - (viii) What is lyophilization?

2. Answer any *four* of the following: 3×4=12
 - (i) Write a brief note on nitrification.
 - (ii) Distinguish between batch and continuous fermentation.
 - (iii) How do you isolate root nodulating bacteria?
 - (iv) Distinguish between the fixed bed and fluid bed bioreactor.
 - (v) Write a method of immobilization of enzymes.
 - (vi) Describe schematically the industrial production of ethanol.
 - (vii) How do you detect coliforms in water?

[P.T.O.]

(2)

3. Answer any *one* of the following:

8×1=8

- (i) With a suitable diagram describe the industrial production of Penicillin using fermentation technology. 3+5
- (ii) Describe the steps in bioremediation of contaminated soil. Mention the role of microbes in it. 5+3
-