



বিদ্যাসাগর বিশ্ববিদ্যালয়
VIDYASAGAR UNIVERSITY
Question Paper

B.Sc. Honours Examinations 2020

(Under CBCS Pattern)

Semester - III

Subject: MICROBIOLOGY

Paper : SEC - 1T

(Biofertilizers and Biopesticides)

Full Marks : 40

Time : 2 Hours

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

The figures in the margin indicate full marks.

Answer any *two* of the following questions :

2 × 20 = 40

1. Differentiate between symbiotic and non-symbiotic nitrogen fixers. How do you isolate Rhizobium from root nodule? Name two free living nitrogen fixer. Describe briefly the field application of symbiotic and non-symbiotic nitrogen fixers. 5+6+2+7=20
2. Write the importance of phosphate solubilizing microbes. Give the example of two phosphate solubilizing bacteria. What is mycorrhiza and mention various types. How does VAM inoculum produced in mass? Give the importance of VAM in crop improvement. 4+2+5+4+5=20
3. Describe the procedure of isolation of phosphate solubilizing microbes. Name one viral and one fungal biocontrol agent. Explain their mechanism of action. 6+2+(6+6)=20

4. Write the importance of biopesticides over synthetic pesticides. Write note on role of *Baculovirus* as biological control agents. Which toxin does *Bacillus thuringiensis* produce and how does it work against insects. What is the importance of using fungal biological control agents. Give the name of two fungi used in biological pest control.

(5+5+5+3+2=20)

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