

2020

MICROBIOLOGY — HONOURS — PRACTICAL

Paper : DSE-B-2P

(Microbes in Sustainable Agriculture and Development)

Full Marks : 30

The figures in the margin indicate full marks.

1. (a) Show a flow chart for isolation of *Azotobacter* from soil (starting from soil collection) stating the composition of the medium used.
 - (b) Enumerate free living nitrogen fixing bacteria (average) in the soil sample A if 10^{-4} , 10^{-5} and 10^{-6} marked dilution plates, show 185, 74 and 6 colonies respectively, following the procedure mentioned by you. (4+2)+4
 2. (a) Draw a biogas plant and label its different parts. State the raw materials to be used for production of biogas in this plant. State the crude biogas composition that is evolved.
 - (b) Suggest two feasible techniques to enhance the digestion of raw material in the biogas plant. (6+1+1)+2
 3. Viva voce (based on the practical syllabus). 5
 4. Laboratory notebook. 5
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