

**B.Sc. Semester - 5 (Remedial) (NEP-2020) Examination****March/April-2026****MIC: Microbes in Sustainable Agriculture (Theory) (Minor-4)****Time: 2:00 Hours****Marks:50****Instructions:**

1. All questions are compulsory.
  2. Figures to the right indicate marks.
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**Que.1** Write short note:

(1) Write on Soil as microbial habitat. (05)

(2) Discuss about Soil profile and properties. (05)

OR

(1) Diversity and distribution of soil microorganisms. (05)

(2) Microbial activity in greenhouse gas – CO<sub>2</sub>. (05)**Que.2** Write short note:

(1) How organic matter mineralized in soil? (05)

(2) Mineralization of cellulose. (05)

OR

(1) Microbial control of soil-borne plant pathogens. (05)

(2) Microbes used as biocontrol agents against weeds - justify. (05)

**Que.3** Write short note:

(1) Role of biofertilizers in agriculture. (05)

(2) A brief note on Plant growth promoting rhizobacteria. (05)

OR

(1) Discuss any one symbiotic nitrogen fixing bacteria. (05)

(2) Write about any phosphate solubilizing bacteria. (05)

**Que.4** Write short note:

(1) Advantages and applications of biogas. (05)

(2) Role of biotechnology in agriculture. (05)

OR

(1) GM crops: advantages and disadvantages. (05)

(2) Golden rice is a transgenic crop - Explain. (05)

**Que.5** Write short note:

(1) Write a note on Nitrous oxide as green-house gas. (05)

(2) How microorganisms control insects? (05)

OR

(1) What are the novel combinations of microbes as biofertilizers? Explain. (05)

(2) Social and environmental aspects of GM crops. (05)

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