

This question paper contains 2 printed pages]

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S. No. of Question Paper : **5383**

Unique Paper Code : **2534001201**

Name of the Paper : **Microbes in Environmental Management**

Name of the Course : **B.Sc. (Hons.) Microbiology**

Semester : **II (UGCF)**

Duration : **2 Hours**

Maximum Marks : **60**

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt any four questions.

All questions carry equal marks.

1. (a) Discuss the role of microbes in cellulose degradation. 5
(b) Discuss any *two* methods used in composting for disposal of solid wastes. 6
(c) Differentiate between Biostimulation and Bioaugmentation. 4
2. (a) What do you understand by Nitrogen fixation. Name the enzyme involved in the process. Write any *one* example each of symbiotic and non-symbiotic nitrogen fixers. 5
(b) How is the strength of sewage determined? 5
(c) Write a short note on Bioremediation of heavy metal contaminated soil. 5

P.T.O.

3. (a) Discuss solubilization and mineralization of phosphorous. 4
- (b) Describe the working of Anaerobic sludge digester. 5
- (c) Discuss the role of microbes in degradation of 2, 4-D. 4
- (d) What is a zoogloal film ? 2
4. (a) What are biofuels ? Explain the role of microbes in Bioethanol production. 7
- (b) What is a septic tanks ? How does it differ from Imhoff tank ? 4
- (c) Write about any *two* methods of tertiary sewage treatment. 4
5. (a) Discuss the role of microbes in degradation of plastic. 5
- (b) What is bioleaching ? Discuss the role of microbes in mineral recovery. 5
- (c) Write a note on bioremediation of marine pollutants. 5