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4

(b) Discuss how 2,4-D is degraded by microorganisms.

(6)

[This question paper contains 4 printed pages.]

**Your Roll No.....**

**Sr. No. of Question Paper : 5888**

**H**

Unique Paper Code : 2534001201

Name of the Paper : Microbes in Environmental  
Management

Name of the Course : Microbiology – Part I,  
(UGCF)

Semester : IV

Duration : 2 Hours

Maximum Marks : 60

**Instructions for Candidates**

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any five questions.
3. All questions carry equal marks.
4. Attempt all parts of a question together.

(200)

P.T.O.

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**2**

1. (a) Write a note on phosphorus cycle giving examples of microorganisms involved. (6)
- (b) Comment upon the role of microbes in management of e-wastes. (6)
2. Write short note on the following (**any three**) :  
(4×3=12)
  - (i) Symbiotic nitrogen fixation
  - (ii) Bioethanol
  - (iii) Measurement of COD
  - (iv) Primary sewage treatment
3. (a) Discuss the role of microorganisms in the degradation of Lignin. (6)
- (b) Explain how solid waste are disposed off by sanitary landfills. (6)

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4. (a) What role does ammonification play in the nitrogen cycle? (4)
- (b) What are algal biofuels? Write their significance. (4)
- (c) Write a note on trickling filter. (4)
5. (a) Discuss the role of microorganisms in bioremediation of petroleum contaminated soils. (6)
- (b) Elaborate on the use of microorganisms in biomining of minerals. (6)
6. (a) Explain the following terms (**any three**) :  
(2×3=6)
  - (i) Bioaugmentation
  - (ii) Recalcitrant compounds
  - (iii) Stuck digester
  - (iv) Algal blooms