

**D 74408**

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Name.....

Reg. No.....

**FIRST SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2014**

(CUCBCSS-UG)

Complementary Course

Biotechnology

BT IC 03—ENVIRONMENTAL BIOTECHNOLOGY

Time : Three Hours

Maximum : 80 Marks

**Section A**

*Answer any **two** out of 4 questions in about 1500 words.*

*Each question carry 10 marks.*

1. Discuss in detail different components of an environment.
2. Explain the role of Biogeochemical cycles in the environment.
3. Discuss how human activities influences the ecosystem.
4. Describe the role of microbes in nitrogen cycle. Elaborate on symbiotic nitrogen fixation.

(2 × 10 = 20 marks)

**Section B**

*Answer any **seven** out of 14 questions in about 750 words.*

*Each carry 5 marks.*

5. Discuss various types of plant-microbe interactions and their significance.
6. Explain water cycle and its significance.
7. What is mean by bioremediation ? Explain its applications.
8. Explain the environmental impacts of use of conventional fuels.
9. What are the advantages of using biosystems in pollution control process ?
10. Give an account on ecological pyramids.
11. Discuss the different sources of pollution and its effect in the environment.
12. Give an account on bioaccumulation and biomeneralization.
13. Discuss about various non-conventional energy sources.
14. Discuss the Hierarchy of different levels of organisation.
15. Discuss Primary, secondary and cyclic succession.
16. Describe the hydrological cycle of environment.

**Turn over**

17. Explain different types of bioleaching and importance of bioleaching.
18. Explain how nutrient availability affects ecosystem.

(7 × 5 = 35 marks)

### Section C

*Answer all questions in about 300 words.  
Each question carries 3 marks.*

19. What is global warming? What are the factors responsible for it?
20. How can we preserve non-renewable resources?
21. Give brief account on major kinds of ecosystems?
22. Explain energy flow in an ecosystem.
23. Differentiate between habitat and niche.

(5 × 3 = 15 marks)

### Section D

*Answer all questions in about 200 words.  
Each carries 2 marks.*

24. Bacillus thuringiensis.
25. Greenhouse effect.
26. Eutrophication.
27. Commensalism.
28. Biomagnification.

(5 × 2 = 10 marks)