

53552

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Name

Reg. No.

**FIRST SEMESTER B.Sc. DEGREE EXAMINATION
JANUARY 2014**

(UG-CCSS)

Complementary Course – BIOTECHNOLOGY

BT 1C 02 – ENVIRONMENTAL BIOTECHNOLOGY

Time : Three Hours

Maximum : 30 Weightage

I. Objective type questions. Answer all *twelve* questions :

A. Match the following :

- | | |
|--------------------------------------|----------------------------------|
| 1. Thiobacillus thiooxidans | Facultative phototrophs . |
| 2. Zoogleal film | High organic load. |
| 3. High BOD | – Sulfate reducers. |
| 4. P-dimethyaminobenzaldehyde | Trickling filter. |
| 5. Desulfovibrio | Red ring. |
| 6. Rhodospirillum rubrum | – Autotrophs . |

B. Name the following :

7. **Enterovirus** found in sewage.
8. Sulfate reducing bacteria.
9. Process where ammonia is converted to nitrate.
10. Enzymes converting proteins to peptides.
11. Free living nitrogen fixer.
12. Example of microbial **mutualism** in ore leaching.

(12 x 'A = 3 weightage)

II. Short answer type questions. Answer all *nine* questions :

13. Parasitism.
14. Proteolysis.
15. The **rhizosphere**.
16. **Enteroviruses**.

Turn over

17. **IMVIC**.
18. Sources of water contamination.
19. Types of pollution.
20. **Remediation** of contaminated soil.
21. Principles of pollution management.

(9 x 1 = 9 **weightage**)

III. Short essay *or* Paragraph questions. Answer any *five* from seven :

22. Negative associations.
23. Nitrification.
24. **Nitrogenase** enzyme complex.
25. Completed test.
26. **MPN**.
27. **Winogradsky** column.
28. Phosphorous cycle.

(5 x 2 = 10 **weightage**)

IV. Essay Questions. Answer any *two* from three :

29. Give a brief account of **vermicomposting**.
30. Outline the plant microbial interactions.
31. Details the water purification methods.

(2 x 4 = 8 **weightage**)