

SECOND SEMESTER U.G. DEGREE EXAMINATION, APRIL/MAY 2013

(CCSS)

Biotechnology

BT 2C 02—ENVIRONMENTAL BIOTECHNOLOGY

Time : Three Hours

Maximum : 30 Weightage

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

A. Multiple choice :

1. Indicator of fecal contamination :

- (a) *Bacillus subtilis*. (b) *Streptococcus*.
(c) *E.coli*. (d) *Klebsiella*.

2. Commonly used nitrogenous biofertiliser :

- (a) *Bacillus polymyxa*. (b) *Rhizobium*.
(c) *Azotobacter*. (d) *Pseudomonas fluorescens*.

3. Which of the following have NOT been used in various bioconversions ?

- (a) Unicellular bacteria. (b) Actinomycetes.
(c) Molds. (d) Viruses.

4. Chlorination of water is an example of _____type of effluent. treatment.

- (a) Primary. (b) Preliminary.
(c) Secondary. (d) Tertiary.

B. Fill in the blanks :

5. _____is an example of bacterial pesticide.
6. An anaerobic nitrogen fixing bacteria is _____
7. CSTR stands for _____
8. _____is methanogenic bacteria.

C. Name the following :

9. Major component of thuringenesis toxin.
10. Name an organism used for bioleaching of copper.
11. A fungal pesticides.
12. Name a lignolytic fungi.

(12 x a = 3 weightage)

Turn over

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

13. Acetogenesis.
14. Biofuel.
15. COD.
16. Biopesticide.
17. RBC.
18. Trickling filter.
19. Septic tank.
20. Water hyacinth.
21. Electrodialysis.

(9 x 1 = 9 weightage)

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

22. Chemical methods of municipal waste water treatment.
23. Management of solid waste.
24. Microbiology of pesticide degradation.
25. Anaerobic methods for waste water treatment.
26. Biogas production.
27. Vermicomposting.
28. Bacteriological analysis of waste water.

(5 x 2 = 10 weightage)

IV. Essay questions. Answer *two* questions from three :

29. Describe various types of biofertilisers with its formulations and utilisation.
30. With suitable examples explain the role of microbes in metal recovery.
31. What is the role of biotechnology in the treatment of industrial effluents.

(2 x 4 = 8 weightage)