S.No. 5075 RCCSBI 9

(For candidates admitted from 2008 to 2015 batch)

B.Sc. DEGREE EXAMINATION, APRIL 2022.

Part III — Biotechnology — Major

ENVIRONMENTAL BIOTECHNOLOGY

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20)

Answer ALL questions.

1. Primary succession
2. Biotic community
3. Biofiltration
4. Catalytic oxidation
5. Point source pollution
6. Biostimulation
7. Biopesticides
8. Rhizofiltration
9. Xenobiotics
10. Bioremediation

SECTION B — (5 × 5 = 25)

Answer ALL questions, choosing either (a) or (b).

11. (a) What are the consequences of ecological pyramids?

Or

(b) Write a note on environmental impact assessment.

12. (a) Discuss the principle and method of tertiary water treatment.

Or

(b) How will you measure O_3, ammonia and particulate matter from air?

13. (a) What are the different ways to achieve composting?

Or

(b) List the difference between in-situ and ex-situ bioremediation.

14. (a) Write a note on the removal of pesticides and BPA by activated carbon.

Or

(b) Write a short note on viral bioinsecticides.

15. (a) What are the advantages of genetically engineered bacteria?

Or

(b) Give account on bioremediation of organic pesticides.

SECTION C — (3 × 10 = 30)

Answer any THREE questions.

16. Write a detailed account on speciation and extinction.

17. Give a detailed account on top three environmental problems.

18. Discuss in detail about the mechanism involved in microbial leaching of ores.

19. What is a biofertilizer? Add note on its importance in crop productivity.

20. Describe the role of genetically engineered microorganisms in agriculture.