### 61527

## Fifth Semester B.Sc. Degree Examination, March/April 2021

(CBCS Scheme)

### **Biotechnology**

# Paper V – GENETIC ENGINEERING AND ENVIRONMENTAL BIOTECHNOLOGY

Time: 3 Hours] [Max. Marks: 70

*Instructions to Candidates : Draw a neat labelled diagrams wherever necessary.* 

#### SECTION - A

I. Write short notes on the following:

 $(5 \times 2 = 10)$ 

- 1. Genomic DNA
- 2. Endo-nuclease
- 3. Primer
- 4. Chealation
- 5. Methane gas

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### SECTION - B

II. Answer any **FOUR** of the following:

 $(4 \times 5 = 20)$ 

- 6. Write a note on Micro injection.
- 7. Write a note on PUC-19.
- 8. Describe the expression of cloned DNA.
- 9. What are genetically engineered microbes? Explain.
- 10. Symbiotic nitrogen fixation.

### SECTION - C

III. Answer any **THREE** of the following:

 $(3 \times 10 = 30)$ 

- 11. What are vectors? Explain any two cloning vectors.
- 12. Illustrate the production of human Growth Hormone.

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- 13. Explain sangars method of DNA sequencing.
- 14. What is biodegradation? Explain the role of microorganisms in it.
- 15. What is Biogas? Explain the process of production.

### SECTION - D

IV. Answer the following:

 $(10 \times 1 = 10)$ 

- 16. ——— is separated in northern blotting.
- 17. What is transcription?
- 18. What is dissolved oxygen?
- 19. Name the antibiotic resistant marker in pUC-19.
- 20. What are detergents?
- 21. Give an example for nitrogen fixing bacteria.
- 22. Cohessive ends
- 23. Recalcitrants
- 24. Who invented PCR?
- 25. Septic tank

