

Seat No. : _____

AF-131

April-2023

B.Sc., Sem.-VI

CC-311 : Microbiology (Biotechnology)

Time : 2½ Hours]

[Max. Marks : 70

- Instructions :**
- (1) All questions are compulsory.
 - (2) Figures on the right indicates marks.
 - (3) Mention correct question number against the answer.
 - (4) Draw figures wherever necessary.

1. Discuss status of biotechnology in India. 14
OR
(A) Explain historical perspective of biotechnology. 7
(B) Discuss scope of biotechnology. 7
2. Discuss principle, working and applications of UV-VIS Spectrophotometer. 14
OR
(A) Explain principle and applications of HPLC. 7
(B) Describe the steps involved in polyacrylamide gel electrophoresis. 7
3. Discuss process of animal cell culture with merits and demerits. 14
OR
(A) Explain steps used for callus culture. 7
(B) Discuss northern blotting technique with its applications. 7
4. Discuss any two transgenic animals with their features. 14
OR
(A) Write a note on herbicide resistant plants. 7
(B) Explain the impact of IPR in biotech industries. 7

5. Give short and specific answers in **1-2** lines only : (any **seven**)

14

- (1) Name the oldest biotechnology process.
 - (2) What is green biotechnology ?
 - (3) Name two premier education institute of biotechnology in India.
 - (4) What is sedimentation co-efficient ?
 - (5) Give any two applications of biosensors in pollution control.
 - (6) Mention any two factors affecting Rf value.
 - (7) Who discovered Cas-9 ?
 - (8) What are feeder cells ?
 - (9) Name any two phytohormones.
 - (10) Name the bacterium having Ti plasmid.
 - (11) Name two enzymes used in detergent industry.
 - (12) What is patent ?
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