

B.Sc. Sem.-6 (Rep) Examination

SE-311

Microbiology (B)

(Biotechnology) (New)

October-2025

[Max. Marks : 70]

Time : 2-30 Hours]

- 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.

- Q.1 Discuss future scope and importance of biotechnology. (14)
OR
- Q.1 (A) Differentiate between old & new biotechnology. (07)
(B) Describe the major developments of biotechnology in India. (07)
- Q.2 Describe principle, methods and applications of UV Visible spectroscopy. (14)
OR
- Q.2 (A) Write a note on biosensors (07)
(B) Explain TLC in brief (07)
- Q.3 Describe northern blotting technique with applications. (14)
OR
- Q.3 (A) Write a note on CRISPR CAS 9. (07)
(B) Discuss primary and secondary animal cell culture. (07)
- Q.4 Describe transgenic animals with suitable examples. (14)
OR
- Q.4 (A) Write a note on baker's yeast. (07)
(B) Explain the industrial applications of enzymes. (07)
- Q.5 Give short and specific answers in 1-2 lines only (any seven). (14)
- 1 Name two examples of biotech companies of India.
 - 2 Name any two biotechnological products,
 - 3 Write any two applications of biotechnology in the field of medicine.
 - 4 Give full form of SDS -PAGE.
 - 5 Name two basic types of materials used to make gels in electrophoresis.
 - 6 Write two applications of centrifugation.
 - 7 Define: Explant
 - 8 Which types of cells are used in continuous cell lines?
 - 9 Why callus needs to be sub-cultured?
 - 10 Name the bacterial gene present in insect resistant plants
 - 11 Write two therapeutic applications of enzymes.
 - 12 Define: Trademark

