

B.Sc Sem.-6 (Rep) Examination

SE 311

Microbiology (B) Biotechnology (N)

Time : 2-30 Hours]

October-2024

[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.

Q.1 Write an account on future scope and importance of biotechnology. (14)

OR

Q.1 (A) Describe the major developments of biotechnology in India. (07)

(B) Differentiate old and new biotechnology. (07)

Q.2 Describe principle methods and applications of UV Visible spectroscopy. (14)

OR

Q.2 (A) Write a note on Paper chromatography. (07)

(B) Write a note on Agarose gel electrophoresis. (07)

Q.3 Discuss about primary and secondary animal cell culture. (14)

OR

Q.3 (A) Write about northern blotting technique with its applications. (07)

(B) Write a note on CRISPR CAS 9. (07)

Q.4 Discuss transgenic animals with suitable examples. (14)

OR

Q.4 (A) Explain the analytical applications of enzymes. (07)

(B) Give details on Intellectual property rights. (07)

Q.5 Give short and specific answers in 1-2 lines only (any seven). (14)

- 1 Give any two applications of biotechnology in the field of environmental biotechnology.
- 2 Give two examples of biotech companies of Gujarat.
- 3 Name any two biotechnology products.
- 4 Give full form of TLC and SDS -PAGE.
- 5 Name 2 basic types of materials used to make gels in electrophoresis.
- 6 Give two applications of centrifugation.
- 7 What is callus?
- 8 What is animal cell line?
- 9 Give two applications of plant tissue culture.
- 10 For the production of which product transgenic cow is used as bioreactor?
- 11 Give two therapeutic applications of enzymes.
- 12 Name a bacterium used for plant transgenesis.