

Seat No. : _____

AL-114

April-2022

B.Sc., Sem.-VI

311 : Microbiology

(Biotechnology)

Time : 2 Hours]

[Max. Marks : 50

- Instructions :**
- (1) **All** questions in Section – I carry equal marks.
 - (2) Attempt any **three** questions in Section – I.
 - (3) Section – II is **COMPULSORY**.

Section – I

1. (A) Define Biotechnology. Discuss scopes in the field of Biotechnology. 7
(B) Explain Multidisciplinary activities of Biotechnology. 7
2. (A) Discuss the development of Biotechnology in Gujarat. 7
(B) Explain old and new Biotechnology. 7
3. (A) Write a short note on HPLC. 7
(B) Explain the principle of Biosensor and discuss various applications of it. 7
4. (A) Give the principle, working pattern and applications of SDS-PAGE. 7
(B) Write a note on UV-Vis spectroscopy. 7
5. (A) Write a short note on Callus culture. 7
(B) Explain primary and secondary animal cell culture. 7
6. (A) Describe CRISPER CAS 9 system. 7
(B) Write a note on Northern Blotting. 7
7. (A) Explain process of Baker's yeast production. 7
(B) Explain Transgenic plants. 7
8. (A) Explain features of animals suitable for gene transfer. 7
(B) Write a note on Enzyme Biotechnology. 7

Section – II

9. Answer the following in 1-2 lines : (any 8)

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- (1) What is Red biotechnology ?
 - (2) Give any two applications of Biotechnology in the field of Medicine.
 - (3) Name any two international biotechnology units across the Globe.
 - (4) Give importance of Biotechnology in Environment.
 - (5) Give two applications of TLC.
 - (6) What is Monochromator ?
 - (7) What is Partition Coefficient ?
 - (8) What is Rf value ?
 - (9) What is Explant ?
 - (10) What do you mean by Totipotency ?
 - (11) Give names of any two herbicide resistant plants.
 - (12) What is the specialty of Golden Rice ?
 - (13) Define Trademark.
 - (14) Give full form of IPR.
 - (15) How Glyphosate works ?
 - (16) Give full form of EPSPS.
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