

DD-802

M. Sc. (Fourth Semester) EXAMINATION, 2020

BIOTECHNOLOGY

Paper Second

(Advanced Techniques in Biotechnology)

Time : Three Hours

Maximum Marks : 80

Note : All questions are compulsory. All questions carry equal marks.

1. (a) Comment on C18 column of HPLC machine.
(b) Mention the advantages of enrichment culture technique.
(c) Comment on Taq polymerase.
(d) Write down principle of southern blotting.

Unit—I

2. Discuss the working principles of ELISA emphasizing application of it in biotechnology.

Or

Write notes on the following :

- (a) Differential and ultra-centrifugation
- (b) Working principle of UV-Vis spectrophotometer

Unit—II

3. Discuss various methods followed for isolation of chemoheterotrophs with suitable examples.

Or

- (a) Discuss principles of microbial nutrition.
(b) Write a note on microbial culture media.

Unit—III

4. Write down working principle and biotechnological applications of NMR.

Or

Write notes on the following :

- (a) XRD
(b) Polymerase chain reaction

Unit—IV

5. Discuss the working principle and application of western blotting in biotechnological research.

Or

Write notes on the following :

- (a) Applications of flow-cytometry
(b) Next-Gen DNA sequencing