

(i) Printed Pages : 2

Roll No.

(ii) Questions : 9 Sub. Code :

1	1	0	5	0
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Exam. Code :

5	0	0	3
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NEP U.G. Common-Skill Enhancement Course 3rd Semester
(2125)

BIOTECHNOLOGY

Paper : Techniques In Biochemistry & Immunology

Time Allowed : Three Hours]

[Maximum Marks : 45

Note :— Attempt *five* questions in all. Q. No. 1 is compulsory and attempt any *one* question from each unit.

1. Answer briefly :

- | | |
|-----------------------------------|---|
| (a) Sandwich ELISA | 2 |
| (b) Gel permeation chromatography | 2 |
| (c) Raman Spectroscopy | 2 |
| (d) Immunoblotting | 3 |

UNIT—I

- | | |
|-------------------------------------------------------------------|---|
| 2. (a) Discuss the principle and working of UV spectrophotometer. | 5 |
| (b) Write a note on the applications of MRI. | 4 |
| 3. (a) Explain the principle of Nuclear Magnetic Resonance. | 4 |
| (b) Differentiate between ORD and CD. | 5 |

UNIT—II

4. (a) Explain the principle and applications of Agarose gel electrophoresis. 5
(b) Discuss the principle of SDS PAGE. 4
5. (a) How can ultracentrifugation be used to separate subcellular fractions? 5
(b) Write a note on Native PAGE. 4

UNIT—III

6. (a) Discuss the principle and applications of Affinity Chromatography. 5
(b) Elaborate on the instrument used & ionization modes for MALDI-TOF. 4
7. (a) How can HPLC be used for separation of mixtures? 4
(b) Explain Bragg's law and its applications. 5

UNIT—IV

8. Write notes on :
- (a) Immunofluorescence
(b) Radioimmunoassay 9
9. (a) Elaborate on the applications of Monoclonal antibodies. 4
(b) Discuss the applications of enzyme immunoassays in diagnostics. 5