

(i) Printed Pages : 3]

Roll No.

(ii) Questions : 9]

Sub. Code :

0	9	5	7
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Exam. Code :

0	0	3	6
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B.Sc. (Hons.) 4th Semester Examination

1047

BIOTECHNOLOGY

(Biophysical and Biochemical Techniques)

Paper : BIOT-Sem-IV-II-T

Time : 3 Hours]

[Max. Marks : 67

Note :- Attempt *five* questions in all. Q. 1 is compulsory.

Select *one* question from each Unit.

1. (a) What is principle of electrophoresis ?
- (b) What is MRI ?
- (c) What is a flourimeter ?
- (d) What is the principle of confocal microscope ?
- (e) Define fixed angle rotor.
- (f) What is a radiotracer ?

N-454

(1)

Turn Over

(g) What is circular dichroism ?

(h) State the principle for TEM.

(i) What is LCMS ?

(j) What is denaturing PAGE ?

1½×10=15

Unit-I

2. (a) Discuss the working of a spectrofluorimeter.

(b) Discuss the equipment for agarose gel electrophoresis.

7,6

3. (a) Discuss the instrumentation for IR spectroscopy.

(b) Describe the different technique of NMR.

7,6

Unit-II

4. (a) Discuss the method of specimen analysis for SEM.

(b) Describe the applications of dark field microscopy.

7,6

5. (a) Describe the working of confocal microscope.

(b) Discuss the technique of ultracentrifugation.

7,6

Unit-III

6. (a) Describe Bragg's law.
- (b) Discuss the methods of mounting of crystal in crystallography. 7,6
7. Discuss the instrumentation of GLC apparatus. Describe the applications of the technique. 13

Unit-IV

8. (a) Discuss the different types of radioisotopes.
- (b) Explain the constitution of a scintillation counter. 6,7
9. (a) Discuss the principle and applications of GC-MS.
- (b) Describe any electron impact ionisation technique in MS. 7,6