

(i) Printed Pages: 2

Roll No.

(ii) Questions : 9

Sub. Code :

0	2	5	8
---	---	---	---

Exam. Code :

0	0	0	3
---	---	---	---

B.A./B.Sc. (General) 3rd Semester

(2122)

BIO-TECHNOLOGY

**Paper : BIOT-Elect-Sem-III-T Introduction to Genetic
Engineering & Immunotechnology**

Time Allowed : Three Hours]

[Maximum Marks : 75

Note :— Attempt five questions in all including Q. No. 9
(Section C) which is compulsory and selecting any
2 questions each from Sections A and B.

SECTION—A

1. (a) Explain the procedure of Gene Cloning. 5
(b) Write a note on Restriction endonucleases their mode of action. 10
2. (a) Describe the construction of a plasmid vector. 7
(b) Write the method for purification of DNA from animal cells. 8
3. Describe the construction of a cDNA library. Discuss its applications. 15

4. (a) Discuss the process of screening of gene library and selection of clone. 7
 (b) Write a note on the applications of PCR. 8

SECTION—B

5. (a) Discuss the structure and function of a primary lymphoid organ. 8
 (b) Describe the cross reactivity and its consequences. 7
6. (a) Describe the features and functions of Cytotoxic T cells. 8
 (b) Write a note on the significance of chemical composition and immunogen dosage on immunogenicity. 7
7. Write a note on functions of Antibody. 15
8. (a) Write a note on Ig Domain and its significance. 7
 (b) Discuss the principle and applications of Immunodiffusion. 8

SECTION—C

9. (1) Bacteriophage. 2
 (2) Electroporation. 2
 (3) NK cells. 2
 (4) Heptans. 2
 (5) What is innate immunity ? 2
 (6) What is the function of T cytotoxic cells ? 2
 (7) What is the principle of agglutination ? 3