

2054
B.Sc. (Hons.) Bio-Informatics
Fourth Semester
BIN-4001: rDNA Technology and Biochemical Techniques

Time allowed: 3 Hours

Max. Marks: 60

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Attempt the following:-

- a) What are ligases?
- b) What is an expression vector?
- c) What are scorable markers?
- d) What is the principle of Adsorption Chromatography?
- e) What is pulse field electrophoresis?
- f) What is centrifugal force? (6x2)

UNIT - I

- II. Discuss the historical developments of rDNA Technology. (12)
- III. a) Discuss the characteristics of Cosmid vector.
b) Discuss the constitution and significance of BAC. (2x6)
- IV. a) Discuss the technique of genomic library screening.
b) Discuss the principle and applications of PCR. (2x6)

UNIT - II

- V. a) Discuss the instrumentation for HPLC.
b) Discuss the technique of Affinity chromatography. (2x6)
- VI. a) Discuss the technique of Native PAGE.
b) Discuss procedure for Agarose gel Electrophoresis of DNA. (2x6)
- VII. Discuss Ultracentrifugation as a tool for nucleic acid preparation and fractionation. (12)

x-x-x