

2053

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 is the role of kinases?
- (b) What is YAC?
- (c) What is the role of immunoscreening?
- (d) What is the principle of HPLC?
- (e) What is 2D PAGE?
- (f) Define pulse field electrophoresis? (6x2)

UNIT - I

- II. a) Discuss scope of rDNA technology.
- b) Discuss the role and types of topoisomerases in DNA modification. (2x6)
- III. a) Discuss characteristics and applications of cosmid.
- b) Discuss constitution of one mammalian expression vector. (2x6)
- IV. a) Discuss the technique of PCR.
- b) Discuss the steps in construction of genomic library. (2x6)

UNIT - II

- V. a) Discuss the technique of GLC.
- b) Discuss principle and procedure for affinity chromatography. (2x6)
- VI. Discuss the technique, instrumentation and applications of SDS PAGE. (12)
- VII. a) Discuss the procedure for Agarose gel electrophoresis of RNA.
- b) Discuss the technique of isoelectric focussing. (2x6)

x-x-x