(Old Course)

	By Papers	Total marks 75

Duration: 3 Hours   By Research   Total marks 100

Note: 1) All questions are compulsory.

2) Figures to the right indicate full marks assigned to the question.

Q I) Discuss the following (any three):   15/ 21

    a) The genetics involved in the life cycle of T4 phage.
    b) Mechanisms of excision repair and SOS repair.
    c) Specialized transduction
    d) The Ac-Ds controlling elements in maize.

Q II) Write an essay on (any one):   15 / 16

    a) Lambda phage repression during lysogeny.
    b) Human genome project.

QIII) Write short notes on (any three):   15 / 21

    a) Retroposons
    b) Bioinformatics in gene finding.
    c) Applications of Polymerase chain reaction processes
    d) Oncogenic viruses.

Q IV) Answer the following (any three):   15 / 21

    a) Give an account on - Tumor suppressor genes.
    b) Discuss – the applications of phylogenetics.
    c) What are transposons? How are composite transposons different from non- composite transposons.
    d) Schematically explain – the apoptotic pathway.

QV) Give an account of (any three):   15 / 21

    a) Functional genomics.
    b) Tools in Bioinformatics.
    c) Discuss how normal cells are transformed into tumor cells.
    d) Diagrammatically explain – life cycle of retroviruses.