

VEER NARMAD SOUTH GUJARAT UNIVERSITY

S.Y. B.sc.

Elements of Biotechnology

Effective From Academic Year June 2005-2006

(interdisciplinary Subject)

(Teaching:- Two Hours per Week)

Total marks : 50

Internal Exams marks : 15

External Exams marks : 35

- (1) **Biotechnology** :- An overview
Origin and definition : old and New Biotechnology,
Scope and Importance of Biotechnology in India.
- (2) **Tools in Biotechnology** :- Recobinant DNA and gene cloning -
cloning vector, molecular probe and gene libraries, PCR and gene
amplification, isolation, sequencing and synthesis of gene.
- (3) **Plant and Biotechnology** :- Plant cell and organ culture, general
protocol, application of tissue culture, morphogenesis and
somaclonal variation, Production and use of haploid, Protoplast
culture regeneration & somatic hybridization, gene transfer
methods in plant, maps of plant genome.
- (4) **Industrial and Microbial Biotechnology** :-Introductory
knowledge of enzyme Biotechnology, Protein engineering,
Immunotoxin and drug designing, Metabolic engineering, use of
microbes in industry and agriculture.
- (5) **Biotechnology and Environment** :- Introductory knowledge of
Application of Biotechnology in pollution control, Enviornment
and energy, Restoration of degraded land, Biodiversity and its
conservation.
- (6) **Biotechnology as intellectual property**:- Intellectual property
right (IPR) and protection (IPP), Patenting of Biological material.

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Books by TIFAC in Biotechnology

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