

2006 JAWAHARLAL NEHRU UNIVERSITY
IV B.TECH II SEMESTER REGULAR EXAMINATIONS
BIO SENSORES AND BIO ELECTRONICS
(BIO-TECHNOLOGY)

APRIL 2006

TIME : 3 HOUR
MARK : 80

answer any five questions all questions carry equal marks

1. What are biosensors? Write in detail about the types of biosensors used in biological applications?
2. Write in detail about the types of membranes used in biosensors and their merits and demerites.
3. Write in brief about types of transducers used in biosensors their principles and applications.
4. Write notes on any two of the following:
 - (a) Piezo electric Transducers
 - (b) Chemiluminescence based biosensors
 - (c) Impedometric Transducers.
5. Write in brief about applications of biosensors in Medicine, agriculture and food industries?
6. Discuss the potential advantages and developments of developing a biomolecular computer.
7. Write in detail about the following:
 - (a) Molecular arrays as memory stores
 - (b) Molecular wires and switches
 - (c) Mechanisms of unit assemblyin a biomolecular computer.
8. Write in brief the designing of biomolecular photonic computer and it's commercial prospects in biotechnology sector.