Code: 9A23704

R09

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December 2015

BIOSENSORS & BIOELECTRONICS

(Biotechnology)

Time: 3 hours Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks
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1 (a) Describe the advantages of biosensors over chemical sensors.
(b) Describe some limitations of biosensors.

2 Describe the principles & applications of affinity based biosensors.

3 Describe the principles & applications of optical transducers for biosensors.

4 Describe chemiluminescence based transducers for biosensors.

5 (a) Describe the principles and applications clinical chemistry, medicine and health care.
(b) Describe the principles & applications of the glucose biosensors of second and third generation.

6 Describe applications of biosensors for environmental monitoring.

7 What are molecular wires and molecular switches?

8 (a) Discuss the prospects of biomolecular computing systems.
(b) Compare the density of biomolecular memory based devices with the existing memory stores in computers that are commercially available.

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