

<b>R07</b>
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Code: R7412304

B.Tech IV Year I Semester (R07) Supplementary Examinations, May 2013

**BIOSENSORS AND BIOELECTRONICS**

(Biotechnology)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions  
All questions carry equal marks

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1. Define biosensors. Explain the different types of biosensors used in biological applications.
2. Write in detail about the types of membranes used in biosensors and their advantages and disadvantages.
3. Write short notes on the following:
  - (a) Conductometric transducers.
  - (b) Optical transducers
  - (c) Potentiometric transducers
  - (d) Calorimetric transducers
4. Write in detail the principle and applications of various transducers in biotechnology sector.
5. Explain the applications of biosensors in clinical chemistry, medicine and health care.
6. Explain about the biosensors used in online monitoring for industrial process.
7. Write about the potential developments and advantages using biomolecular computer.
8. Write a note on:
  - (a) Information processing
  - (b) Assembly of biomolecular memory storage.

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