

Code: R5102301

**R05**

B. Tech I Year (R05) Supplementary Examinations, May 2012  
**COMPUTER PROGRAMMING FOR BIOTECHNOLOGISTS**  
(Biotechnology)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions  
All questions carry equal marks

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- 1 Define hardware. Explain about input and output devices.
- 2
  - (a) Explain about the principles of software engineering.
  - (b) Write about the operating systems Unix and Linux. Differentiate between Unix and Linux.
- 3
  - (a) With example discuss about flowchart and algorithm.
  - (b) Explain about increment and decrement operators with example.
- 4
  - (a) Define an array. Explain about two dimensional array with example.
  - (b) Discuss about string variables.
- 5 What is a function? Write about call by value and call by reference with example.
- 6
  - (a) Explain about CODD'S rules.
  - (b) Differentiate between RDBMS and DBMS.
- 7
  - (a) Write about circular queue.
  - (b) Transform the following infix expression into their equivalent prefix expressions.  
 $A * (B + D) / E - F * (G + H / K)$ .
- 8 Discuss about system biology markup language in detail.

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