

B.Tech. Degree (F.T/P.T) I & II Semester (Combined)
Examination, June 2001

IT/CS/EC/CE/ME/SE/EI/EB/EE 109 COMPUTER FUNDAMENTALS

(2000 admissions)

Time: 3 Hours

Max. Marks: 100

*(All programs should be written in C language. For the question with * mark, provide flow chart and a sample output)*

- I What is a computer? Explain its basic architecture along with the functioning of its each sub unit. (20)
- OR**
- II a) How does the data storage in hard disk differ from that of a floppy disk ? (10)
 b) Explain the various language processors used today. (10)
- III a) Explain the various control statements used in C with specific examples. (12)
 b)* Write a program to reverse a given integer number. (8)
- OR**
- IV a) Discuss about the enumerated data types in C with specific examples. (8)
 b)* Write a program to find roots of a Quadratic equation of the form $ax^2 + bx + c = 0$, using switch statement. (12)
- V a) What are functions? How is it defined and accessed? (10)
 b)* Write a function to find the greatest of two integers. Use this function to find the greatest of three integers. (6)
 c) Explain the scope of the storage class specifier REGISTER. (4)
- OR**
- VI a) What is meant by recursion? How is it implemented? Is it more efficient than a non-recursive version? (8)
 b)* Write a program to find the binomial coefficient ${}_n C_r$. Use recursion to find the factorial. (12)
- VII a) How is an array name related to a pointer? How is an array name interpreted when it appears as an argument to a function? (6)
 b)* Write a program to sort the list of student names using bubble sorting algorithm. Use arrays to store the list. (14)
- OR**
- VIII a) Discuss about the C preprocessor with examples. (6)
 b)* Write a program to add two 2D matrices and print the result in a matrix form. Each 2D matrix should be represented as an array of pointer to one-dimensional arrays. (14)
- IX a) Briefly discuss about the various database models. (10)
 b) Discuss about the binary operations in the relational algebra. (10)
- OR**
- X a) What is meant by data abstraction? Explain the various levels of data abstraction in a database system. (10)
 b) What is SQL? Explain the SELECT command with syntax and examples. (10)

