Reg. No. : | | | | | | | | | | |

S 4820

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2007.

Annual Pattern — First Year

Civil Engineering

GE 1 X 02 — COMPUTER PROGRAMMING

(Common to All Branches of B.E./B.Tech.)

(Regulation 2004)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. What are the different types of software?

2. What is meant by debugging?

3. List the rules that are to be followed while declaring variables.

4. With an example, state the purpose of break and continue statement.

5. What is recursion? Write a recursive procedure to evaluate factorial of N.

6. List and discuss the various string operations.

7. State the advantages of using pointers.

8. Compare structures with union.

9. What are the different types of linked list? State all the basic linked list operations.

10. State any two applications of stacks and queues.

PART B — ($5 \times 16 = 80$ marks)

11. (a) (i) Draw and explain the block diagram of a computer. (10)

(ii) Write notes on :

- High level languages and Low level languages. (3)
- Internet Services. (3)

Or

(b) (i) Explain in detail the various stages involved in developing a program. (10)

(ii) What are the essential properties of an algorithm? Develop an algorithm to generate fibonacci series upto 100. (6)

12. (a) (i) Explain the various input and output functions supported by C languages. (10)

(ii) State and explain the various data types supported by 'C' language. (6)

Or

(b) (i) With an example, explain switch statement. (8)

(ii) State the differences between Entry controlled loop and Exit controlled loop. (8)

13. (a) (i) Write notes on :

- Actual and Formal parameters. (6)
- Various storage classes supported by C language. (6)

(ii) What is the need for declaring function prototype? (4)

Or

(b) (i) Write a C program to get a matrix as input and perform the following operations.

- Add all the diagonal elements. (5)
- Find the transpose of a given matrix. (5)

(ii) Write a C program to get an array of N inputs and perform the search operation. Print the number of occurrences of a given element with their position. (6)

14. (a) Write a C program to perform string operations using pointers.

(i) Find the length of a given string. (4)

(ii) String copy (6)

(iii) String concatenate. (6)

Or

(b) Explain the various file handling functions with suitable example. (16)

15. (a) Write a C program to implement following singly list operation.

(i) To print number of occurrences of a particular element. (8)

(ii) Concatenation of two linked list. (8)

Or

(b) Write a C program to implement Push and Pop operation on linked list. (16)
