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

Question Paper Code : 27655

B.E./B.Tech. DEGREE EXAMINATION, DECEMBER 2015/JANUARY 2016

First Semester

Civil Engineering

GE6151 : COMPUTER PROGRAMMING

(Common to all branches)

(Regulations - 2013)

Time : Three Hours **Maximum : 100 Marks**

Answer ALL questions.

PART – A (10 × 2 = 20 Marks)

1. Convert $(1011101)_2$ to octal.
2. Differentiate between algorithm and pseudocode.
3. What is meant by linking process ?
4. What are the input and output functions in C ?
5. Write a C program to store Fibonacci series in an array.
6. List the string functions available in C.
7. State the significance of pointers.
8. Write a program to print the first 50 prime numbers recursively.
9. Define a structure called ID_Card to hold the details of a student.
10. List some C preprocessor directives.

PART – B (5 × 16 = 80 Marks)

11. (a) (i) Elaborate the various generations of computers and their characteristics and represent them in a tabular format. **(8)**

(ii) Write in detail about the basic organization of a computer. **(8)**

OR

(b) Write an algorithm and flowchart to simulate the railway ticket booking process.

12. (a) (i) Describe the structure of a C program using "Calculator program" example. **(8)**

(ii) Write short note on branching statements in C. **(8)**

OR

(b) Write in detail about the various looping statements with suitable examples.

13. (a) (i) Write a C program to multiply two 3 × 3 matrices. **(10)**

(ii) Write a C program to find the determinant of the resultant matrix. **(6)**

OR

(b) Write the following programs :

(i) to sort a given set of strings alphabetically. **(6)**

(ii) to print whether each word is a palindrome or not. **(6)**

(iii) to count the length of each string. **(4)**

14. (a) (i) What is the difference between call by value and call by reference ? What are the problems associated with each ? Explain with suitable examples. **(8)**

(ii) What are the advantages of using recursion ? Demonstrate with examples. **(8)**

OR

(b) Write in detail about pointer arithmetic. Support your answer with appropriate examples.

15. (a) (i) What is the need for structure data type ? Does structure bring additional overhead to a program ? Justify. **(10)**

(ii) Write short note on structure declaration. **(6)**

OR

(b) What are the storage classes available in C ? Demonstrate the working of each storage class.