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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.

