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Question Paper Code : 97078

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

First Semester

Civil Engineering

GE 6151 — COMPUTER PROGRAMMING

(Common to all Branches)

(Regulation 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define flow chart. Why is flow chart required?
2. What is an algorithm?
3. What is a variable? Illustrate with an example.
4. Give an example for Ternary operator.
5. Declare a float array of size 5 and assign 5 values to it.
6. Give an example for initialization of string array.
7. What is a function?
8. What is an address operator and indirection operator?
9. Define static storage class.
10. What is the use of #define preprocessor?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain in detail with neat diagram about the digital computer organization and each of its unit. (10)
 (ii) What is pseudo code? Write a pseudo code for swapping two numbers without using temporary storage. (6)

Or

- (b) (i) Perform the following : (12)
 (1) $(100101)_2 - (11111001)_2$
 (2) $(1011101)_2 \times (1011)_2$
 (3) $(2A947)_H = (?)_2$
 (4) $(4872) = (?)_8$
 (ii) Discuss the need for Logical Analysis with an example in brief. (4)
12. (a) What are the various operators available in C? Discuss each one of them with suitable illustrations. (16)

Or

- (b) Explain in detail about various looping structures available in C with illustrative programs. (16)
13. (a) (i) Write a C program for sorting an array of numbers. (8)
 (ii) Explain the various string operations. Write a C program to find out the length of the string without using builtin function. (8)

Or

- (b) (i) Write a C program to multiply two matrices. (8)
 (ii) Write a C program to search an element in a given array. (8)
14. (a) What is a function in C? Discuss about call by value and call by reference with illustrations. (16)

Or

- (b) What is recursion? Explain a recursive function with suitable example. Write a iterative and recursive function to find the power of a number. (16)
15. (a) (i) What is a structure? Create a structure with data members of various types and declare two structure variables. Write a program to read data into these and print the same. (10)
 (ii) Justify the need for structured data type. (6)

Or

- (b) Write short notes on : (4 × 4 = 16)
 (i) Unions
 (ii) Register storage class
 (iii) # include statement
 (iv) # ifndef...#endif