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Question Paper Code : 51047

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2023.

Seventh Semester

Agriculture Engineering

OCS 752 – INTRODUCTION TO C PROGRAMMING

(Common to: Biomedical Engineering/ Civil Engineering/ Electrical and Electronics Engineering/ Electronics and Communication Engineering/ Electronics and Instrumentation Engineering/ Electronics and Telecommunication Engineering/ Instrumentation and Control Engineering/ Medical Electronics/ Bio Technology/ Fashion Technology/ Food Technology/ Handloom and Textile Technology/ Pharmaceutical Technology/ Textile Chemistry/ Textile Technology)

(Regulations 2017)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Variable. Give the naming rule for a variable.

2. Differentiate break and continue statement.

3. What do you mean by transpose of a matrix?

4. Write the syntax for initializing default array element.

5. Give the function with syntax to copy the string.

6. Define pointer.

7. What is function prototype?

8. Define recursive function.

9. Differentiate array and structure.

10. Give the syntax for declaring array of structure.

PART B — (5 × 13 = 65 marks)

11. (a) (i) Discuss about the various types of operators used in C programming. (7)

    (ii) Write a C program to compute arithmetic operation using switch case statement. (6)

    Or

    (b) (i) Explain the various types of decision – making statements with syntax and example. (7)

    (ii) Give the basic structure of the C program and explain. (6)

12. (a) (i) Define array. How do you declare 1D and 2D arrays. Give the various operations performed in arrays. (7)

    (ii) Write a C program to find the sum of odd and even numbers from the array. (6)

    Or

    (b) Write a C program to get an input matrix A with 'r' rows and 'c' columns and find the sum of diagonal elements in the Matrix A. (13)

13. (a) (i) Develop a C program to reverse a string without using in – built function. (7)

    (ii) Define pointer. How do you declare a pointer? State the use of pointer. (6)

    Or

    (b) (i) Write a C program to print the number of vowels from an input string. (7)

    (ii) Write a C program to find the length of the string without using in – built function. (6)

14. (a) (i) Demonstrate a C program to add two numbers using call by reference. (7)

    (ii) Differentiate call by value and call by reference with suitable example. (6)

    Or

    (b) (i) Write a C program to find the factorial of a number using recursion. (7)

    (ii) Explain any three string in – built functions with syntax and example. (6)

15. (a) Write a C program to get Basic Pay of 'n' employee and compute other allowances like DA, TA, IT, PF and finally compute the Net salary of the employee using array of structures. (13)

    Or

    (b) (i) Give an example to demonstrate nested structure. (7)

    (ii) How do you pass a structure to a function? Give example. (6)

PART C — (1 × 15 = 15 marks)

16. (a) Write a C program to get 'n' numbers in an array and perform the following

    (i) Search an input element 'x' is present in the array or not. (8)

    (ii) Remove the duplicate elements from the array. (7)

    Or

    (b) Write a C program to get 'n' names in an array and perform the following

    (i) Find the biggest and smallest name from the array. (8)

    (ii) Print the palindrome names from the array. (7)

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