LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc., B.C.A., DEGREE EXAMINATION – **COMPUTER SCIENCE & APP.**

FIRST SEMESTER – **NOVEMBER 2016**

CS 1503/CA 1503 – PROGRAMMING IN C

Date: 05-11-2016   Dept. No.   Max. : 100 Marks

Time: 01:00-04:00

PART – A

ANSWER ALL QUESTIONS   **(10x2 = 20 marks)**

1. Define Flowchart. Why flow chart is required?
2. What are the main features and applications of C language?
3. What is the difference between while loop and do..while loop?
4. What is an array? Give an example.
5. Give an example of initialization of string array.
6. Write a function in C to swap two values.
7. Give the comparison between union and structure.
8. What is a Pointer? Give example.
9. What are the types of file streams?
10. What is the use of pre-processor directives?

PART – B

ANSWER ALL QUESTIONS   **(5x8 = 40 marks)**

11.a) Explain about various operators in C programming.

(Or)

  b) Write an algorithm and draw a flow chart to compute factorial of a given number.

12.a) Explain in detail about various decision making statements with their syntax and examples.

(Or)

  b) Explain about two dimensional arrays. Write a program for multiplication of two matrices.

13.a) Explain about all the string handling functions with their syntax and give examples.

(Or)

  b) What is recursion? Write a program using recursion for finding the fibonacci series.

14.a) Write a C program that gets and displays the report of n students with their personal and academic details using structures.

(Or)

  b) i) Explain about pointers and its types with examples. (4)
    ii) Explain about pointer arithmetic with examples. (4)

15. a) Explain about various file manipulation functions in C.

(Or)

  b) What are preprocessor directives? Explain in detail about Macro substitution and file inclusion Directives with examples.

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PART – C

ANSWER ANY TWO QUESTIONS   **(2 x 20 = 40 marks)**

16. a) Explain in detail about the steps involved in computer programming.

    b) Explain in detail about formatted and unformatted input and output operations.

17. a) Explain in detail about the following parameter passing mechanism
        i) Call by value
        ii) Call by Reference.

    b) Write a C program to read and displays n employees with their personal and employment
       information using array of structures.

18. a) Explain in detail about Dynamic memory allocation. Write the syntax ofmalloc(), calloc(), realloc()
       and free() functions with suitable examples.

    b) What is storage class? Explain in detail about various storage classes with suitable examples.

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