LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.C.A. DEGREE EXAMINATION – **COMPUTER APPLICATIONS**

FIRST SEMESTER – **APRIL 2016**

CA 1505 – PROGRAMMING IN C

Date: 02-05-2016   Dept. No.   Max. : 100 Marks
Time: 01:00-04:00

PART A

ANSWER ALL THE QUESTIONS: (10 X 2 = 20)

1. What are the conventions used in writing an algorithm?
2. What is the use of typedef statement?
3. Differentiate Break and Continue statements.
4. Write the general structure of switch case statement.
5. How an array of pointers can be initialized?
6. Define strings.
7. What is the use of functions?
8. Define recursion.
9. Why is a structure called a heterogeneous data type?
10. What is bit fields?

PART B

ANSWER ALL THE QUESTIONS: (5 X 8 = 40)

11. a) Explain the classification of computers.
                    (Or)
    b) Define flowchart. Explain the various symbols used in the flowchart.

12. a) What is the syntax of the while loop? Draw the control diagram of the while loop. Is the while a
       top-tested or a bottom-tested loop?
                    (Or)
    b) A break statement is used to exit a loop or a switch-case structure. What happens if the break
       statement is used outside any such construct?

13. a) Explain pointers to pointers with an example.
                    (Or)
    b) Explain arrays of strings.

14. a) Distinguish between actual and formal parameters.
                    (Or)
     b)Explain the mechanism to pass arguments to a function.

15. a) Describe structure within structure with an example.
                    (Or)
    b) Explain command line argument with an example.

PART C

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

16. a) Describe the steps involved in writing a program.

    b) Explain the role of the initialization, test and update expression in a for loop.
       When are each of them executed?

17. a) Explain the standard functions in manipulating strings.

    b) Write a C program to find out the largest and smallest element in the vector.

18. a) Explain storage class with an example.

    b) What is a union? How is it different from a structure?

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