Code No: 13 / S

FACULTY OF ENGINEERING

B.E. I-Semester (CBCS) (Supple.) Examination, May / June 2018

Subject: Computer Programming & Problem Solving

Time: 3 Hours **Max. Marks: 70**

Note: Answer all questions from Part-A & any Five questions from Part-B.

PART-A (2x10=20Marks)

1. What is the difference between declaration and definition of a Variable?
2. Mention the need for Associatively of Operators with an example.
3. How to choose between while and Do-while loops in Programming?
4. Is function an integral component of every C program?
5. List out the different phases of compilation of C program
6. Mention the applications of arrays
7. Differentiate between malloc and calloc memory allocation functions
8. What is the difference between string and a character in C programming?
9. Mention different ways to access the members of the structures with examples.
10. Define streams.

PART-B (5x10=50 Marks)

11. a) Explain increment and decrement operators in c with examples 5
    b) convert $(150)_{10}$ to octal equivalent 5
12. a) Differentiate iterative and Recursive functions. Write a recursive function for finding GCD of a number 6
    b) Elaborate on scope and lifetime of the variables in C. 4
13. a) Is a macro function call is efficient than normal function call. Justify 5
    b) Write an algorithm for Selection sort, with an example. 5
14. Give three variables x,y,z write a function to circularly shift right values. In other words if x=5, y=8, z=10 after circular shift y=5, z=8, x=10. Call the function with variables a,b,c to circularly shift their values 10
15. Create a structure to specify data on students given below 10
    Roll No, Name, Department, Course, Year of Joining
    A typical student's data will be 1456 M.Raghu E.C M.E 1994
    Assume that there are not more than 500 students in the college
    (i) write a function to print names of all students who joined in a particular year
    (ii) Write a function to print the data of a student whose roll number is given
16. a) What are escape sequences in C languages? 5
    b) Explain pointers to Arrays in C. 5
17. Write short notes on :
    a) Command line arguments in C 5
    b) Self referential structures 5

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