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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**MCA I Year I Semester (R16) Supplementary Examinations June 2017**  
**COMPUTER PROGRAMMING AND PROBLEM SOLVING**

(For Students admitted in 2016 only)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 X 12 = 60 Marks)

**UNIT-I**

- 1 a. Define Algorithm. Write an algorithm for 2<sup>nd</sup> order fibonacci series 6M  
b. List and explain with neat sketch the symbols used in flowchart to explain logical flow of data 6M

**OR**

- 2 a. What is the difference between keyword and identifier? Explain with example 6M  
b. Write a brief note on floating and fixed point number representation 6M

**UNIT-II**

- 3 a. What are the different types of unformatted input and output functions in C.? 6M  
b. Explain about post increment and pre-increment operators with an Example. 6M

**OR**

- 4 a. Define and distinguish break and continue statement in C with example 6M  
b. Write a C program to generate Fibonacci series using iterative control statement. 6M

**UNIT-III**

- 5 a. How memory mapping is done for one dimensional and two dimensional array in a linear random access memory? Explain in detail 6M  
b. Write a C program to perform addition of two matrices. 6M

**OR**

- 6 a. Explain the use of scanf() and printf() with code snippet 6M  
b. Write a C program to count vowels and consonants in a given string 6M

**UNIT-IV**

- 7 a. Write a brief note on arithmetic operations with pointers with example 6M  
b. Write a C program to swap two numbers using call by reference variable in Functions 6M

**OR**

- 8 a. What are the different storage classes used in C programme? Explain in detail 6M  
b. Distinguish global and static variable in C with code snippet 6M

**UNIT-V**

- 9 a. Write a Program to pass the address of a structure variable to user defined function and display the contents. Use a Structure object boy With three fields: name, age and height. 6M  
b. Briefly discuss about i) Sequential Files ii) Random Access Files. 6M

**OR**

- 10 a. Explain various character input and output functions for files, and also give suitable examples. 6M  
b. List and explain the functions which makes random access in sequential file with example 6M

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