

**Reg. No:**

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

**MCA I Year I Semester Supplementary Examinations Nov/Dec 2019**  
**COMPUTER PROGRAMMING AND PROBLEM SOLVING**

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- 1 a With a neat sketch explain the block diagram of computer. 6M  
b Write an algorithm and flowchart to check given number is Armstrong or not. 6M

**OR**

- 2 a Discuss about type casting. 6M  
b Write about character set of C. 6M

**UNIT-II**

- 3 a List and explain different types of operators in C. 6M  
b Write a C program to find primes in the given range. 6M

**OR**

- 4 a Explain about unformatted input and output functions. 6M  
b Discuss various formats of if statement. 6M

**UNIT-III**

- 5 What is an array? How is it initialized? How are the elements of two dimensional arrays stored? Comment on the accessing of the elements with the help of an example. 12M

**OR**

- 6 a What is the difference between recursive and non-recursive functions? Give their merits and demerits. 6M  
b Write a recursive function to find the factorial of the given number. 6M

**UNIT-IV**

- 7 Explain about different storage classes with examples along with scope rules. 12M

**OR**

- 8 a What is user defined functions? Discuss with an example. 6M  
b Write a program to illustrate passing by address example. 6M

**UNIT-V**

- 9 a How to read from and write to a file? Explain with examples. 6M  
b Explain C pre-processor. 6M

**OR**

- 10 a Discuss typedef with example. 6M  
b Write short notes on unions within structures. 6M

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