

**Reg. No:**

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

**MCA I Year I Semester Supplementary Examinations November- 2020**

**COMPUTER PROGRAMMING AND PROBLEM SOLVING**

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- 1 a Write Algorithm and Flowchart to find whether the given number is Palindrome or not. 6M  
b What is data type? Explain type conversions in detail. 6M

**OR**

- 2 a Describe the difference between variable and constant with Example. 6M  
b Explain C Delimiters in detail. 6M

**UNIT-II**

- 3 a Explain various formats of if statement with Syntax. 6M  
b Write a C program to generate Fibonacci series? 6M

**OR**

- 4 Explain Arithmetic, Assignment and Bitwise Operators with example program. 12M

**UNIT-III**

- 5 a Define an array. How to declare and initialize two dimensional arrays? 6M  
b Write a C program to perform addition of two matrices. 6M

**OR**

- 6 a What is a recursive function? Explain its merits and demerits. 6M  
b Write a C Program to find the factorial of the given number. 6M

**UNIT-IV**

- 7 Explain the following with example program.  
a Call by Value 6M  
b Call by Reference 6M

**OR**

- 8 a How is dynamic memory allocation done in C? Explain. 6M  
b What library functions are provided by C for dynamic memory allocation? Discuss with example. 6M

**UNIT-V**

- 9 a Define structure. How to declare, initialize and access the structure elements. 6M  
b Write a C program to illustrate structures and functions. 6M

**OR**

- 10 a Explain fopen(), fprintf(), fscanf() and fclose() functions. 6M  
b Discuss #define & #include directives. 6M

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