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

MCA I Year I Semester (R16) Regular Examinations January 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

- Q.1** a. How are computers classified? How are they different from one another? Explain in detail. 6M
b. What are the different types of number systems supported by computers? And explain the significance of Hexa Decimal number 6M

OR

- Q.2** a. What is the difference between primary and derived data types? Explain with an example 6M
b. Write a short note on constant variable and volatile variable 6M

UNIT-II

- Q.3** a. List out the binary and unary operator supported by C compiler? Explain its characteristics with example 6M
b. Illustrate the use of formatted I/O functions with code snippet 6M

OR

- Q.4** a. Write a code snippet to find GCD of given two number using iterative loop 6M
b. Distinguish nested if-else and switch statement with examples 6M

UNIT-III

- Q.5** a. What is an array? How arrays are declared and initialized? Explain with example 6M
b. Write a C programme to find the sum and average of 50 integer values 6M

OR

- Q.6** a. List and explain the case conversion functions for string and character 6M
b. Write a C programme to extract tokens from a given string assuming space as a default delimiter. 6M
Ex- "Raju is appointed as manager"
Tokens are -(Raju, is, appointed, as and manager)

UNIT-IV

- Q.7** a. Differentiate pointer type variable and automatic variable with examples. 6M
b. How array elements can be accessed using pointer? Explain with examp 6M

OR

- Q.8** a. What is the difference between call by value and call by reference parameters used in functions? Explain with example 6M
b. Write C programme to find factorial of a given number using recursive function 6M

UNIT-V

- Q.9** a. What is preprocessor? Explain in detail about #include and # define 6M
b. Write a C program to define student entity with the following member (rollno, name, percentage) and create 10 instances and display 10 student entity using arrays 6M

OR

- Q.10** a. Distinguish struct and union with examples 6M
b. Explain in detail the different file modes used in fopen() function. 6M

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