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

B.Tech I Year I Semester Supplementary Examinations Nov/Dec 2019  
PROGRAMMING FOR PROBLEM SOLVING  
(Common to CE,MECH,AGE&EEE)

Time: 3 hours

Max. Marks: 60

**PART-A**

(Answer all the Questions 5 x 2 = 10 Marks)

- |   |   |  |    |
|---|---|--|----|
| 1 | a | Define an Algorithm and give any example of Algorithm. | 2M |
|   | b | Differentiate exit and return statements.              | 2M |
|   | c | Define Recursion.                                      | 2M |
|   | d | Define Pointer-Array.                                  | 2M |
|   | e | Compare Union and Structure.                           | 2M |

**PART-B**

(Answer all Five Units 5 x 10 = 50 Marks)

**UNIT-I**

- |   |   |  |    |
|---|---|--|----|
| 2 | a | What is Constant? Explain different ways to make constants in C. | 5M |
|   | b | Explain importance of Precedence and Associativity.              | 5M |

**OR**

- |   |   |  |    |
|---|---|--|----|
| 3 | a | List various Flowchart symbols and draw a flowchart for any example. | 5M |
|   | b | Explain about type conversion in C.                                  | 5M |

**UNIT-II**

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|---|--|--|-----|
| 4 |  | Differentiate for, while, and do-while loops and explain with separate examples. | 10M |
|---|--|--|-----|

**OR**

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|---|---|--|----|
| 5 | a | Write a program to find the sum of even and odd numbers from 1 to n. | 5M |
|   | b | Explain Break, Continue, and Goto statements with an example.        | 5M |

**UNIT-III**

- |   |   |  |    |
|---|---|--|----|
| 6 | a | Write a C program to sort the given array elements in Ascending order. | 5M |
|   | b | List out advantages and disadvantages of Arrays.                       | 5M |

**OR**

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|---|---|--|----|
| 7 | a | List and explain various predefined functions in C.                        | 6M |
|   | b | What is recursion? What are the advantages and Disadvantages of recursion? | 4M |

**UNIT-IV**

- |   |   |  |    |
|---|---|--|----|
| 8 | a | Explain various String handling functions.           | 5M |
|   | b | Write a program to swap two numbers using functions. | 5M |

**OR**

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|---|---|---|----|
| 9 | a | Explain pointer-arithmetic operations.                              | 5M |
|   | b | Write a program to check whether given string is palindrome or not. | 5M |

**UNIT-V**

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|----|---|--|----|
| 10 | a | Write a C program to read and display student details using structure. | 5M |
|    | b | Explain File status i/o functions.                                     | 5M |

**OR**

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|----|---|---|----|
| 11 | a | Explain file positioning i/o functions.             | 5M |
|    | b | Explain self-referential structure with an example. | 5M |

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