

Reg. No:

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

B.Tech I Year II Semester Supplementary Examinations May-2022

C PROGRAMMING AND DATA STRUCTURES

(Common to EEE, ME and ECE)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

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| 1 | a Explain in detail about the data types in C. | L2 | 6M |
| | b Write a program for to find reverse of the given number. | L5 | 6M |

OR

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| 2 | a Define the syntax and use of switch statement with suitable example. | L1 | 6M |
| | b Explain about precedence and associativity in C. | L3 | 6M |

UNIT-II

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|---|--|----|----|
| 3 | a Write a C program for displaying smallest element in array. | L3 | 6M |
| | b Distinguish between call by value and call by reference with examples. | L4 | 6M |

OR

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| 4 | Define String. Explain the different string handling functions with example. | L4 | 12M |
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UNIT-III

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| 5 | a How do you define structure within a structure? Explain with an example. | L2 | 6M |
| | b Illustrate the use of typedef with suitable example. | L3 | 6M |

OR

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|---|---|----|----|
| 6 | a What is a pointer? What are the features of pointers? Write a C program to print address of a variable. | L1 | 6M |
| | b What is the use of period operator? Give an example. | L1 | 6M |

UNIT-IV

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| 7 | a What is data structure? Explain the linear and nonlinear data structure in detail. | L2 | 6M |
| | b What are the advantages and disadvantages of stack and queue? | L1 | 6M |

OR

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| 8 | Implement the following single linked list operations: | L6 | 12M |
| | i) Insertion of a node | | |
| | ii) Deletion of a node | | |
| | iii) Searching an element | | |

UNIT-V

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| 9 | Define sorting? Mention different types of sorting. Explain Quicksort in detail. | L4 | 12M |
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| 10 | a Compare binary search and linear search techniques. | L4 | 6M |
| | b Find the number 77 from the following set of numbers using binary search : 6, 12, 17, 23, 38, 45, 77, 84, 90. | L3 | 6M |

*** END ***