

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

B.Tech II Year I Semester Supplementary Examinations June-2024

C AND DATA STRUCTURES

(Common to CSE & CSIT)

Time: 3 Hours

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

Max. Marks: 60

UNIT-I

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|---|---|-----|----|----|
| 1 | a What is an expression? Explain different categories of expressions. | CO1 | L2 | 6M |
| | b Write a program to find sum of individual digits of a given number. | CO5 | L3 | 6M |

OR

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|---|--|-----|----|-----|
| 2 | Define an operator? Explain the arithmetic, relational, logical and assignment operators in C language with appropriate example. | CO1 | L1 | 12M |
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UNIT-II

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| 3 | a Discuss any five string handling functions. | CO1 | L6 | 6M |
| | b Distinguish between call by value and call by reference with examples. | CO1 | L6 | 6M |

OR

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| 4 | What is 2D array? Write program for addition of 2 matrices. | C04 | L3 | 12M |
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UNIT-III

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| 5 | a Give difference between the structures and union. | C02 | L4 | 6M |
| | b What is a pointer? What are the features of pointers? Write a C program to print address of a variable. | C02 | L1 | 6M |

OR

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| 6 | a Briefly explain bit fields concept. | CO1 | L2 | 6M |
| | b Explain the concept of pointer to pointers with examples. | CO2 | L5 | 6M |

UNIT-IV

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| 7 | What is a queue? What are various operations that can be performed on them? Explain with an example. | CO2 | L2 | 12M |
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OR

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| 8 | State any two applications of stacks and queues? With an example, explain infix, postfix and prefix notations. | CO2 | L6 | 12M |
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UNIT-V

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| 9 | Explain the applications of linked lists. | CO1 | L2 | 12M |
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OR

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| 10 | What do you mean by sorting? Mention different types of sorting. Explain Quick sort in detail. | CO1 | L1 | 12M |
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