

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

B.Tech I Year II Semester Supplementary Examinations May/June-2024
PROGRAMMING FOR PROBLEM SOLVING
(Common to ECE,CSE & CSIT)

Time: 3 Hours

Max. Marks: 60

PART-A

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

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|---|---|---|-----|----|----|
| 1 | a | Write difference between algorithm and flowchart. | CO1 | L2 | 2M |
| | b | Classify the different types of decision making statements. | CO1 | L1 | 2M |
| | c | What is multi-dimensional array? | CO1 | L2 | 2M |
| | d | Define pointer array. | CO1 | L1 | 2M |
| | e | Write about different file modes. | CO2 | L2 | 2M |

PART-B

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

UNIT-I

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|-----------|---|--|-----|----|-----|
| 2 | | Write detailed notes on C data types. | CO1 | L1 | 10M |
| OR | | | | | |
| 3 | a | Write an algorithm and flowchart to find whether the given number is prime or not. | CO1 | L1 | 5M |
| | b | Explain about type conversion in C. | CO2 | L2 | 5M |

UNIT-II

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|-----------|---|--|-----|----|----|
| 4 | a | Write and explain about switch statement | CO2 | L2 | 4M |
| | b | Write a Program to perform arithmetic operations using switch | CO2 | L2 | 6M |
| OR | | | | | |
| 5 | a | Explain else-if ladder with the help of flowchart and program. | CO3 | L2 | 5M |
| | b | How does nested if-else works explain with an example? | CO3 | L3 | 5M |

UNIT-III

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|-----------|---|--|-----|----|----|
| 6 | a | Define an array.How to initialize one-dimensional array? Explain with suitable examples. | CO3 | L4 | 5M |
| | b | Write a C program to sort the given array elements in Ascending order. | CO2 | L4 | 5M |
| OR | | | | | |
| 7 | a | What is recursion? What are the advantages and Disadvantages of recursion? | CO4 | L3 | 6M |
| | b | Write a C program to find the factorial of a given number using recursion. | CO3 | L3 | 4M |

UNIT-IV

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|-----------|---|---|-----|----|----|
| 8 | a | Define pointer. How to declare and initialize it. | CO3 | L5 | 6M |
| | b | Write a C program to illustrate the use of indirection operator to access the value pointed by a pointer. | CO4 | L6 | 4M |
| OR | | | | | |
| 9 | a | Write a C program to implement strcmp() , strcat() , strcpy() and strlen(). | CO4 | L3 | 5M |
| | b | Write a program to find the average marks obtained by a class of 50 students in a test. | CO3 | L6 | 5M |

UNIT-V

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|-----------|---|--|-----|----|-----|
| 10 | a | Define union. Give the general template for union. | CO4 | L5 | 5M |
| | b | List out the differences between unions, structures and arrays. | CO4 | L2 | 5M |
| OR | | | | | |
| 11 | | Write a C program to count no.of characters, spaces, lines, words of a file. | CO4 | L6 | 10M |

*** END ***

