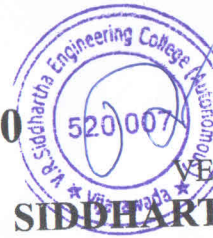


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VELAGAPUDI RAMAKRISHNA
SIDDHARTHA ENGINEERING COLLEGE
(AUTONOMOUS)

I/IV B.Tech. DEGREE EXAMINATION, April, 2022

First Semester

20ES1103 PROGRAMMING FOR PROBLEM SOLVING
(All Branches)

Time: 3 hours

Max. Marks: 70

Part-A is compulsory

Answer One Question from each Unit of Part - B

Answer to any single question or its part shall be written at one place only

PART-A

10 x 1 = 10M

1.
 - a. List out the basic properties of an algorithm.
 - b. State the problem definition.
 - c. What are the requirements of problem solving by computers?
 - d. Define a variable.
 - e. In which situations type conversion is required?
 - f. How recursion is different from iteration?
 - g. What is pointers to pointers?
 - h. Classify the functions in C.
 - i. Name the different modes of opening a file.
 - j. Mention the purpose of dot operator.



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PART-B

4 x 15 = 60M

UNIT-I

2. a. Choose the appropriate examples for the implementation of problem solving strategies and discuss. **8M**
- b. Analyze the algorithm for generating the Fibonacci sequence for 'n' terms. **7M**

(or)

3. a. Assess the top-down design development and stepwise refinement. Also list out the advantages and drawbacks. **8M**
- b. Interpret the algorithm for printing the elements of an upper triangular matrix. **7M**

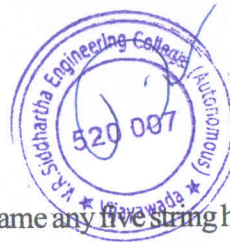
UNIT-II

4. a. List out all the operators available in C language and explain each operator with syntax and example. **8M**
- b. Why are arrays required in C Programming? Describe various ways of accessing and displaying the array elements. **7M**

(or)

5. a. Illustrate the looping statements in C language with examples. **8M**
- b. Develop a C program to perform arithmetic operations using switch statement. **7M**

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UNIT-III

6. a. Name any five string handling functions and discuss the functions with suitable examples. **8M**
- b. Explain the mechanism related to the call by value and call by reference. **7M**

(or)

7. a. Demonstrate the memory allocation functions in C language. **8M**
- b. Define a pointer. Describe the concept of pointers for inter-function communications. **7M**

UNIT-IV

8. a. Outline the declaration, initialization and accessing of the structures. **7M**
- b. Develop a C program to copy the contents of two files into a separate file. **8M**

(or)

9. a. Analyze the file input and output functions in C with examples. **7M**
- b. Examine the usage of command line arguments with a suitable example. **8M**

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