# SREE VIDYANIKETHAN ENGINEERING COLLEGE
**(An Autonomous Institution, Affiliated to JNTUA, Ananthapuramu)**
## I B.Tech II Semester (SVEC-19) Regular Examinations, December-2020
### PROGRAMMING FOR PROBLEM SOLVING
**[Electrical and Electronics Engineering, Electronics and Communication Engineering, Electronics and Instrumentation Engineering]**

Time: 3 hours                                                                 Max. Marks: 60

**Answer One Question from each Unit**
**All questions carry equal marks**

## UNIT-I

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. | a) | Describe basic building blocks of flowchart with suitable examples. | 6 Marks | L1 | C01 | PO1 |
| | b) | Discuss about type conversion with necessary examples. | 6 Marks | L2 | C01 | PO1 |

**(OR)**

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|---|---|---|---|---|---|---|
| 2. | a) | Describe comparison, logical and bitwise operators in detail with examples. | 6 Marks | L1 | C02 | PO1 |
| | b) | Explain the basic data types available in Python with examples. | 6 Marks | L2 | C01 | PO1 |

## UNIT-II

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|---|---|---|---|---|---|---|
| 3. | a) | Write Python code to check if a given year is a leap year or not. | 6 Marks | L1 | C02 | PO2 |
| | b) | Write Python code to find the factorial of a number. | 6 Marks | L1 | C02 | PO2 |

**(OR)**

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|---|---|---|---|---|---|---|
| 4. | a) | Write Python program to reverse a number and also find the Sum of digits in the reversed number. | 6 Marks | L2 | C02 | PO2 |
| | b) | Discuss about usage of pass and else statements used with loops. | 6 Marks | L2 | C01 | PO1 |

## UNIT-III

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|---|---|---|---|---|---|---|
| 5. | a) | Write Python program to perform a search for a given key number in the list and report success or failure. | 6 Marks | L2 | C02 | PO1 |
| | b) | Write Python program to convert uppercase letters to lowercase and vice versa. | 6 Marks | L2 | C02 | PO2 |

**(OR)**

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|---|---|---|---|---|---|---|
| 6. | a) | Write about the following in Python: <br> i) list   ii) dictionary   iii) tuple | 6 Marks | L2 | C02 | PO3 |
| | b) | Write Python program to sort numbers of any list of integers in ascending order. | 6 Marks | L2 | C02 | PO2 |

## UNIT-IV

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|---|---|---|---|---|---|---|
| 7. | a) | What is need for function? Explain how to define and call function. | 6 Marks | L2 | CO1 | PO1 |
| | b) | How to write to and read from a file? Give suitable examples. | 6 Marks | L2 | CO2 | PO2 |

**(OR)**

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|---|---|---|---|---|---|---|
| 8. | a) | Discuss about recursive functions with suitable examples. | 6 Marks | L2 | CO1 | PO1 |
| | b) | List out any three built in functions in date and time and explain. | 6 Marks | L2 | CO1 | PO2 |

## UNIT-V

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|---|---|---|---|---|---|---|---|
| 9. | a) | How to read the data from `.csv` file? | 6 Marks | L2 | CO2 | PO3 |
| | b) | Write a python script to drop the missing data from data frame. | 6 Marks | L2 | CO2 | PO2 |

**(OR)**

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|---|---|---|---|---|---|---|---|
| 10. | a) | Discuss about the creation of data frame with suitable example. | 6 Marks | L3 | CO2 | PO2 |
| | b) | Explain bar plot with a suitable programming example.<br>Hint: Given the number of students enrolled - 23,17,35,29,12 courses offered - 'C', 'C++', 'Java', 'Python', 'PHP'. | 6 Marks | L3 | CO2 | PO3 |

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