# SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
## B.Tech III Year II Semester Regular Examinations August-2023
### DATA ANALYTICS USING R
(Computer Science & Information Technology)

**Time: 3 Hours**　　　　　　　　　　　　　　　　　　　　　　　　　**Max. Marks: 60**

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

**UNIT-I**

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|---|---|---|---|---|---|
| 1 | a | Define Data Sets. | CO1 | L1 | 6M |
| | b | Explain about the tools used for Data Analytics. | CO1 | L2 | 6M |

**OR**

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|---|---|---|---|---|---|
| 2 | a | Explain the following Correlations:<br>　　i) Spearman Correlation　　ii) Pearson Correlation | CO1 | L2 | 6M |
| | b | Suppose the current annual salary of all teachers in the United States have a normal distribution with a mean of 51000 dollars and a standard deviation of 6000 dollars. Find the probability that the annual salary of a randomly selected teacher would be between 42000 and 65000. | CO1 | L3 | 6M |

**UNIT-II**

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|---|---|---|---|---|---|
| 3 | a | Discuss in detail about the Linear regression. | CO2 | L2 | 6M |
| | b | Explain the T-test in detail. | CO2 | L2 | 6M |

**OR**

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|---|---|---|---|---|---|
| 4 | a | Explain following Data structures:<br>i) Data Frames　　ii) Classes | CO2 | L2 | 6M |
| | b | Write a R program to do all the arithmetic operations. | CO2 | L6 | 6M |

**UNIT-III**

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|---|---|---|---|---|---|
| 5 | a | Write a R program to find sum of natural numbers. | CO3 | L6 | 6M |
| | b | Write a R program to find whether a given number is even or odd. | CO3 | L6 | 6M |

**OR**

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|---|---|---|---|---|---|
| 6 | a | Explain the break and next statements in R with an example. | CO3 | L2 | 6M |
| | b | Write a R program to count the number of even number using for loop. | CO3 | L6 | 6M |

**UNIT-IV**

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|---|---|---|---|---|---|
| 7 | a | What is a vector in R ? Explain classes and elements of a vector. | CO4 | L1 | 6M |
| | b | How to access the elements of a vector? | CO4 | L2 | 6M |

**OR**

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|---|---|---|---|---|---|
| 8 | a | What is an Array in R? Explain How to create an array. | CO4 | L1 | 6M |
| | b | Explain how to access the elements of an array. | CO4 | L2 | 6M |

**UNIT-V**

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|---|---|---|---|---|---|
| 9 | a | Explain the following functions for list with an example:<br>　　i) lapply()　　　ii) sapply() | CO5 | L2 | 6M |
| | b | Explain how to add and delete the elements of a list with an example. | CO5 | L2 | 6M |

**OR**

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|---|---|---|---|---|---|
| 10 | | Explain the following techniques with syntax and example:<br>　i) Pie chart　　　ii) Scatter | CO5 | L2 | 12M |

**\*\*\* END \*\*\***