Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – April/May– 2017**

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| **Code :** | |  |  | | --- | --- | | **14BI2019** |  | | **Duration :** | **3hrs** |
| **Sub. Name :** | **R PROGRAMMING** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| Q. No. |  | Questions | Course  Outcome | Marks |
| 1. |  | Define function definition and list the components R function with syntax. Write R script, show examples and describe the following calling a function without an argument, with argument, by position, by name and lazy evaluation of a function. | CO1 | 20 |
| (OR) | | | | |
| 2. |  | Write R script to show how factor objects are used to categorize the data and store it as levels. Also explain the working of factors functions with data frame. | CO1 | 20 |
| 3. |  | Construct a three dimensional pie chart using R script. Pie chart should contain atleast ten slices and explain the syntax with all available features. | CO2 | 20 |
| (OR) | | | | |
| 4. |  | Explain how do you read, write and analyze different file formats using data interface in R. | CO2 | 20 |
| 5. |  | Write R script to develop the following chart and graphs:  i)Line graph ii) Multiline graph iiii) Histograms | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Explain various types of string functions used in R script. Show examples of string manipulations done using string functions. | CO3 | 20 |
| 7. |  | Write R script to compute mean, median and mode for the given data set.Example should contain syntax, description and all possible features. | CO3 | 20 |
| (OR) | | | | |
| 8. |  | Show how computation and pattern matching done on biological sequences using Seqinr package and functions. | CO3 | 20 |
|  | | **Compulsory:** |  |  |
| 9. |  | Show the steps to establish linear regression and multiple regression models in R with suitable examples. Discuss all the available functions, features and visualization of regression graphically. | CO3 | 20 |

ALL THE BEST