

**Roll No.**

**Total No. of Pages : 02**

**Total No. of Questions : 07**

## **B.Sc(Artificial Intelligence & Machine Learning) (Sem.-5)**

# R PROGRAMMING

**Subject Code : UGCA 1946**

**M.Code : 92411**

**Date of Examination : 12-12-22**

**Time : 3 Hrs.**

**Max. Marks : 60**

**INSTRUCTIONS TO CANDIDATES :**

1. **SECTION-A is COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **SIX** questions carrying **TEN** marks each and students have to attempt any **FOUR** questions.

## SECTION-A

**1. Write briefly :**

- a) R is called a dynamically typed language.
- b) R provides graphical facilities for data analysis.
- c) A list is an R-object which can contain many different types of elements inside it.
- d) A matrix is a two-dimensional rectangular data set.
- e) The values of the variables can be printed using `print()`.
- f) List various datatypes used in R.
- g) R language is rich in built-in operators and provides various types of operators.
- h) Factors can store both strings and integers.
- i) In R, S3 and S4 classes are the two most important classes for object-oriented programming.
- j) Debugging in R is through warnings, messages and errors.

## SECTION-B

2. How rows and columns are added and deleted in matrix? Differentiate between matrix and vector.
3. How data frames are merged? Discuss the common functions used with factors.
4. Define Recursion. Write a program to add first ten natural numbers using recursion.
5. What is the role of control statements? Write a program to find first ten prime numbers.
6. How reading from and writing to the files is done? Give one example of `regexpr()` function.
7. What is the significance of generating random numbers? Explain with the help of suitable example.

**NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.**