# PSG COLLEGE OF ARTS & SCIENCE
## (AUTONOMOUS)

## MSc DEGREE EXAMINATION MAY 2023
### (Fourth Semester)

### Branch – COMPUTER SCIENCE

## PYTHON & R PROGRAMMING

Time: Three Hours                                                             Maximum: 50 Marks

### SECTION-A (5 Marks)
Answer ALL questions
ALL questions carry EQUAL marks                        (5 x 1 = 5)

1   The correct extension of the python file is
   (i)   .python                              (ii)  .pl
   (iii)  .py                                 (iv)  .p

2   Which keyword is used for function in python language?
   (i)   Function                             (ii)  def
   (iii)  Fun                                 (iv)  Define

3   A _____ represents an entity in the real world with its identify and behaviour.
   (i)   method                               (ii)  object
   (iii)  class                               (iv)  operator

4   Which function cannot be used to import a csv file in R?
   (i)   read.table()                         (ii)  read.csv()
   (iii)  read_excel()                        (iv)  read_r()

5   What will be the output of the following R code?
```
>x<-1:4
>y<-6:9
>z<-x+y
>z
```
   (i)   7 9 11 13                            (ii)  7 9 11 13 14
   (iii)  9 7 11 13                           (iv)  9 11 13 7


### SECTION - B (15 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks                        (5 x 3 = 15)


6   a   Explain the features of python.
                            OR
    b   Discuss about Lines and Indentation with example.


7   a   Categorize the different types of control statement in Python.
                            OR
    b   Illustrate the creation of simple calculator using functions in Python.


8   a   Classify the various inheritance in Python.
                            OR
    b   Explain how to create File and opening a File in python.

9  a  Explain Getting started with R.

OR

b  Discuss the basic features & limitations.

10  a  Categorize the various operations on Dates and Times in R.

OR

b  Explain the debug() & recover() in R with example.

## SECTION -C (30 Marks)
### Answer ALL questions
ALL questions carry EQUAL Marks          (5 x 6 = 30)

11  a  Elucidate about the basic Syntax of Python.

OR

b  Categorize the logical & bitwise operators in Python.

12  a  Interpret the role of lists in Python.

OR

b  Determine the working of Tuples in Python.

13  a  Enumerate how to access, built-in Dictionary Functions & Methods with example.

OR

b  Interpret about exception handling in python with example.

14  a  Analyze R objects, Numbers, Attributes & Vectors.

OR

b  Assess the concept of using dput() & dump() in R.

15  a  Categorize the various Argument Matching in R functions.

OR

b  Elucidate about the scoping rules of R.

Z-Z-Z                                    END