PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2022
(Fourth Semester)

Branch – COMPUTER SCIENCE

PYTHON & R PROGRAMMING

Time: Three Hours   Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks   (10 x 1 = 10)

1   _____is an identifier that has predefined meaning.
    (i) variable   (ii) identifier   (iii) keyword   (iv) None of these

2   Identify the invalid keyword below.
    (i) and   (ii) as   (iii) while   (iv) until

3   How many operands are there in the following arithmetic expression? 6 * 35
    + 8 – 25
    (i) 4   (ii) 3   (iii) 5   (iv) 8

4   Which operator returns the remainder of the operands?
    (i) /   (ii) //   (iii) %   (iv) **

5   Single-line comments start with the symbol?
    (i) *#   (ii) #   (iii) *   (iv) &

6   Python programs get structured through _____.
    (i) Alignment   (ii) Indentation
    (iii) Justification   (iv) None

7   Which of the following function is used to read data from the keyboard?
    (i) function()   (ii) str()   (iii) input()   (iv) print()

8   R was created by_____.
    (i) Ross Ihaka   (ii) Robert Gentleman
    (iii) Both A and B   (iv) Ross Gentleman

9   Command lines entered at the console are limited to about _____ bytes
    (i) 4095   (ii) 4096   (iii) 4097   (iv)4098

10 R files has an extension _____.
    (i) .S   (ii) .RP   (iii) .R   (iv) .SP

SECTION - B (25 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks   (5 x 5 = 25)

11 a   Discuss the Python environment setup in detail.

OR

  b   Explain the basic data types available in Python with examples.

12 a   Illustrate the Python Looping statements with example.

OR

  b   Describe the built-in list functions in detail.

13 a   Explain about built in dictionary functions and methods.

OR

  b   Classify the seek and find a file in python.

14 a   List out the limitations of R.

OR

  b   Determine the memory requirements for R objects.

15 a   Explain the operations on dates and times in R.

OR

  b   Explain about debugging tools in R.

SECTION -C (40 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks   (5 x 8 = 40)

16 a   Explain the Identifiers, Keywords, Statements, and Variables in Python programming language with examples.

OR

  b   Describe Arithmetic Operators, Assignment Operators, Logical Operators and Bitwise Operators in detail with examples.

17 a   Explain the Python control statements with examples.

OR

  b   Discuss the relation between tuples and lists, tuples and dictionaries in detail.

18 a   Explain the Classes and Objects in R with example.

OR

  b   Describe the Exception handling in R.

19 a   Classify the nuts and bolts of R system.

OR

  b   Detail discussion about the Textual and Binary formats for storing data.

20 a   Explain the control structure statements in R with example.

OR

  b   Differentiate between the Lexical Vs Dynamic scoping.

Z-Z-Z   END