D 31988 (Pages : 2) Name..

Reg. No....................................

THIRD SEMESTER (CBCSS–UG) DEGREE EXAMINATION, NOVEMBER 2022

Econometrics and Data Management

CSC 3(4) C07—PYTHON AND R PROGRAMMING

Time : Two Hours Maximum : 60 Marks

Section A

Answer **all** *questions.*
Each question carries 2 *marks.*
Maximum Ceiling 20 *marks.*

1. Give the syntax of *if...elif...else* statement in Python.

2. What are immutable objects in Python ? Give examples.

3. What are sets in Python ?

4. What is fancy indexing in Python ? Explain.

5. Write a short note on logical operators in Python.

6. What is the purpose of lambda function in Python ? Explain.

7. What is MongoDB ? Give its use in Python.

8. List any two features of R language.

9. What is the difference between ANOVA and t-test ?

10. How to create a Box Plot in R ?

11. What is Multiple Linear regression ?

12. What type of analysis is Kruskal-Wallis ?

Section B

Answer **all** *questions.*
Each question carries 5 *marks.*
Maximum ceiling 30 *marks.*

13. Explain the salient features of Python programming language.

14. Explain any five built-in Tuple functions.

15. Write a Python program to compute the factorial of a number using recursion.

16. Explain *try...except* statement in Python with suitable example.

Turn over

17. Write a program in R using *while* loop construct with *continue* statement for printing all even numbers in between 10 and 100.

18. Write about scatter plot and histograms in R with examples? Explain its importance.

19. Write about *apply* method in R? write about *lapply* and *sapply* with suitable examples

Section C

Answer any **one** *question.*
The question carries 10 *marks.*

20. Explain the syntax and function of different loop control statements in Python with examples.

21. Write a short note on the following objects in R :

   (i)   Vector.   (ii)   Data frame.

 (iii)   Matrix.   (iv)   List.