PG – 730

III Semester M.B.A. (Day and Eve.) Examination, June/July 2024
(CBCS) (2022-23)
MANAGEMENT
3.11.1 : Data Science using R and Python

Time : 3 Hours | Max. Marks : 70

SECTION – A

Answer **any five** of the following. **Each** question carries **five** marks **each**. **(5×5=25)**

1. Mention five benefits of using Python. How to open a new file in Python ?
2. What are various modules in Python ? Explain about the import statement with examples.
3. Explain what is dictionary and how it is created in Python ? What is meant by key-value pairs in a dictionary ?
4. What is data frame in Python ? How do you create a data frame in python ? Give an example.
5. What do you understand by Data Type Conversion ? Explain how this Data Type Conversion is executed in R and Python.
6. Explain the need of descriptive statistics in R. What are the descriptive statistics functions in R, explain the importance of these functions along with the necessary examples.
7. Where do you use line graph and bar chart, scatter plots ? Explain how we plot all these 3 graphs using R functions along with Syntax and an example.

SECTION – B

Answer **any three** of the following. **Each** question carries **ten** marks **each**. **(3×10=30)**

8. Create a 2-D array called myarray4 using arrange () having 14 rows and 3 columns with start value = – 1, step size 0.25 having. Split this array row wise into 3 equal parts and print the result.
9. Explain in detail about Python files, its types, functions and operations that can be performed on files with examples.

P.T.O.

10. Compare and contrast different types of plots (e.g., scatter plots, histograms and boxplots) in terms of their applications using R programming and what insights they provide about data ?

11. Explain Array Operations using Numpy (Array Creation, Slicing, Manipulation, Aggregation function).

SECTION – C

12. **Compulsory** question : **(1×15=15)**

Discuss the key functionalities and differences between using Matplotlib and Seaborn for data visualization in Python and how can customizations be effectively applied to various types of plots to enhance their visual impact ? Discuss with necessary syntax, code and examples along with sample plots, graphs etc.