T – 5728

Reg. No. : ....

Name : ....

Fourth Semester M.A. Degree Examination, July 2024

Behavioural Economics and Data Science

BEDS 543 : FOUNDATIONS OF DATA ANALYSIS USING R AND PYTHON

(2020 Admission Onwards)

Time : 3 Hours

Max. Marks : 75

PART – I

Answer **all** questions, each carries **1** mark.

1. Data Science.

2. Estimation.

3. Clustering.

4. Python interpreter.

5. Code Readability.

6. Plotting in R.

7. Coding.

8. Bivariate analysis.

9. Model validation.

10. Sensitivity measure.

(10 x 1 = 10 Marks)

P.T.O.

PART – II

Answer any **seven** questions, each carries **5 marks**.

11. How does Data Science contribute to decision-making processes within organizations?

12. Explain the concept of Prediction in Data Science and its significance.

13. What is the purpose of using comments in Python code? Explain with examples.

14. Describe the process of setting up graphics in Python.

15. Explain the process of getting data into R.

16. Distinguish between Exploratory Data Analysis and Hypothesis testing.

17. What is a contingency table? How to construct contingency tables using Python?

18. Define regression modelling and explain its significance in data analysis.

19. Explain the concept of model evaluation in regression modelling and its importance.

20. How does R-squared measure the goodness of fit in regression models?

(7 × 5 = 35 Marks)

PART – III

Answer any **three** questions, each question carries **10 marks**.

21. How does Data Science methodology differ from traditional statistical analysis?

22. Explain the role of variables in Python programming. Describe the characteristics of variables and how they are used to store and manipulate data.

23. What are the steps involved in downloading R and R Studio? Explain the purpose of each software in the context of coding in R.

24. How to Construct histograms with Overlay Using python? Explain.

25. Explain the method of performing multiple regression modelling using Python.

(3 × 10 = 30 Marks)

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