Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with A++ Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Continuous Internal Assessment –I - August 2025
Semester- V

Class: III UG **Time: 2 Hours**
Branch : Information Technology **Max. Marks: 60**

23BITC10 Data Science

Course Outcomes:
CO1: Understand the fundamental concepts of Data Science
CO2: Apply data pre-processing and analysis techniques for handling large data
CO3: Visualize and present the inference using various tools
CO4: Understand various machine learning algorithms used in data science process
CO5:Comprehend various data science tools with real-world applications

Part A **6 x 1 =6**
Choose the Correct Answer

1. Identify the key data science skills among the following CO1 K1
a.Data Visualization b. Machine Learning c.Statisticsd. All the above

2. Which of the following is not a part of the data science process? CO1 K5
a. operationalize b.Discovery c.model planning d.Communication building

3. Which function is used to combine the elements into a vector? CO2 K3
a. C() b.D() c.E()d. F()

4. Factors are the R-objects which are created using a _____ CO2 K2
a. Lists b.Matrix c. Vector d.Array

5. Which of the following is not important in determining data quality? CO3 K3
a. Accuracyb. Databasec.Consistencyd.Completeness

6. Which of the following is not a form of data transformation? CO3 K3
a. Normalization b.Discretizationc. Compression d. Concept hierarchy

Part B 3 x 6 = 18

Answer ALL questions

Each answer should not exceed 400 words or two pages

7.a.Discover the Basic Terminologies of Data Science (Or) CO1 K1
7.b.Explain the Components of Data Science CO1 K2

8.a.Illustrate with examples Function in R(Or) CO2 K2
8.b.Examine Logistic Regressionby using AlgorithmCO2 K3

9.a.PredictData Integration Methodsin Data Science(Or) CO3 K3
9.b.Write Data Transformation Techniques in Data Science CO3 K3

Part C 3 x 12 = 36

Answer ALL questions

Each answer should not exceed 800 words or four pages

10.a.EnumerateTypes of Datawith example (Or) CO1 K1
10.b.Describe in detail aboutClassifications and Algorithms of Data Science CO1 K2

11.a.Demonstrate how to create Data Framesin R with Program Code(Or)CO2 K2
11.b.Sketch Correlation with all Tests CO2 K3

12.a.Demonstrate Data Cleaning Methods with Examples (Or)CO3 K3
12.b. ExplainData Reduction Techniqueswith examples CO3 K2

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