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Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD) [now MOE]
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 B.Sc

Time: 1 hour

Major: Computer Science 23BCSDE2

Max.Marks: 30

23BSDE2 Fundamentals of Data Science

Course Outcomes:

At the end of the course, students will:

CO1: Ability to apply the basic Data Science Knowledge on various problems.

CO2: Contribution of the knowledge gained on choosing and evaluation on different models..

CO3: Understanding the application and use of regression Techniques.

CO4: Attaining knowledge to identify the application areas of various unsupervised methods..

CO5: analysing the documents for final deployment and effective presentation.

Part A

Choose the correct answer

10 x 1 = 10

1. Who sets & executes analytical strategy? CO1K1
a.Data architect b. Data Scientistc. Data analystd.Data Operator.
2. The concept of grouping items based on similarity is called _____. CO1K2
a.Classifying b. Clusteringc. Grouping d. Ordering
3. Identify the most important language for Data Science. CO1_ K1
a) Java b) Ruby c) R d) Python
4. Select the best skill needed for data science. CO1_K2
a) Statistics b) Machine Learning c) Data Visualization d) All of the mentioned
5. Which of the following is not a part of data science process? CO2_K2
a) Discovery b) Model Planning c) Communication Building d) Operationalize
6. _____ plot displays information as series of data points connected by straight lines. CO2_K2
a) Bar b) Line c) Scatter d) Histogram
7. Interpret under which Machine Learning pattern does Apriori algorithm occurs? CO2_ K2
a) Un- Supervised b) Supervised c) Deep learning d) Pattern based
8. Which classification method is used when input variables interact with the output?CO3K1
a. Naïve Bayes b. Decision Trees c. Linear Regression d.SVM
9. What is the machine learning terminology to find objects that tend to appear in the data together? CO2K2
a.Regressionb. Nearest Neighbour c.Clusteringd. Association Rule
10. In validating model the concept of undesirable distance between predictions and actual values is called _____. CO2K3
a.Variance b. Bias c. overfitd. Nonsignificance

Part B

Answer All Questions

4 x 5 = 20

Each answer should not exceed 400 words or two pages

1. a) Illustrate on the standard phases regulated in the field of Data Science.CO1K3
(Or)
b). Discuss on the process of loading Data into R package. CO2K2
2. a) Discuss on the various methods to be focused for Data transformations. CO1K2
(Or)
b).Elucidate on the visualization process utilized to gather the insights of the data. CO2K2
3. a)Explain on the mapping problems to Machine Learning. CO2K2
(Or)
b) Highlight on the statistical measures used for data modeling. CO2K2
4. a) Explain on Linear Regression model with a neat sketch and suitable example. CO3K4
(Or)