



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)
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

Major: Computer Science

Time:1 hour

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

- Who sets & executes analytical strategy? CO1K1
a.Data architect b. Data Scientistc. Data analystd.Data Operator
- The concept of grouping items based on similarity is called _____. CO1K2
a.Classifying b. Clusteringc. Grouping d. Ordering
- Identify the most important language for Data Science. CO1_ K1
a) Java b) Ruby c) R d) Python
- Select the best skill needed for data science. CO1_K2
a) Statistics b) Machine Learning c) Data Visualization d) All of the mentioned
- Which of the following is not a part of data science process? CO2_K2
a) Discovery b) Model Planning c) Communication Building d) Operationalize
- _____ plot displays information as series of data points connected by straight lines. CO2_K2
a) Bar b) Line c) Scatter d) Histogram
- Interpret under which Machine Learning pattern does Apriori algorithm occurs? CO2_ K2
a) Un- Supervised b) Supervised c) Deep learning d) Pattern based
- Which classification method is used when input variables interact with the output?CO3K1
a. Naïve Bayes b. Decision Trees c. Linear Regression d.SVM
- 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
- 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

- 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
- 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
- a)Explain on the mapping problems to Machine Learning. CO2K2
(Or)
b) Highlight on the statistical measures used for data modeling. CO2K2
- a) Explain on Linear Regression model with a neat sketch and suitable example. CO3K4
(Or)
b).Discuss on the following CO2K3
i) Evaluating Scoring Models ii) Evaluating Clustering Models

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