Ashy

DATA SCIENCE AND MACHINE LEARNING (Elective)

Time : 2:30 Hours] [**Maximum Marks : 50**

NOTES :

   i)   Attempt **all** questions.

   ii)   Students are advised to specially check the Numerical Data of question paper in both versions. If there is any difference in Hindi Translation of any question, the students should answer the question according to the English version.

   iii)   Use of Pager and Mobile Phone by the students is not allowed.

Q1)   Answer any two of the following :   [2×5=10]

   a)   Distinguish between supervised learning and reinforcement learning. Illustrate with an example.

   b)   Discuss any four examples of Machine learning applications.

   c)   Illustrate K means clustering algorithm with an example.

Q2)   Answer any two of the followig: [2×5=10]

   a)   Discuss the necessity of dimensionality reduction in machine learning.

   b)   Why clustering of social network graphs is important? How are social networks represented as graphs?

   c)   What do you understand by the term Normal Distribution?

Q3)   Answer any Two of the following :   [2×5=10]

   a)   Explain Decision Tree algorithm in detail.

   b)   During analysis, how do you treat missing values?

   c)   What is Exploratory Data Analysis?

Q4)   Answer any two of the following: [2×5=10]

   a)   How can the data be normalized?

   b)   Differentiate among Univariate, Bivariate, and Multivariate analysis?

   c)   What is Artificial Intelligence? Give an example where AI is used on a daily basis.

Q5)   Write short note on any two of the following: [2×5=10]

   a)   Neural Network

   b)   Data Visualization

   c)   Next generation Data Scientist

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