Dr. A.P.J. Abdul Kalam Technical University (AKTU) · B.Tech Theory Examination

Data Analytics

KCS051 · 2022

Time: 3 Hours **Max. Marks: 100**

Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1(a)	Differentiate between Predictive and Prescriptive Data Analytics.	2	U1
1(b)	Differentiate between Analysis and Reporting.	2	U1
1(c)	What is Lasso Regression?	2	U2
1(d)	Differentiate between Univariate & Multivariate Analysis.	2	U2
1(e)	How is steam Processing Different from Traditional Data Processing?	2	U3
1(f)	What is the role of Sliding Window in Analysis of Streaming Data?	2	U3
1(g)	Explain the Principle behind Hierarchal clustering Technique.	2	U4
1(h)	Define Lift in Association Data Mining.	2	U4
1(i)	What is the basic description of a Box Plot In R	2	U5
1(j)	List two Data Visualization Tool	2	U5

SECTION B

2(a)	Explain the Process Model and Computation Model of Big Data Platform	10	U1
2(b)	Explain the Working of an Artificial Neural Network for Image Classification Task.	10	U2
2(c)	Discuss the Publish/ Subscribe Model of Streaming Architecture.	10	U3
2(d)	What are the advantages of PCY algorithm over Apriori Algorithm?	10	U4
2(e)	What makes NoSQL Databases different from RDBMS	10	U5

SECTION C

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3(a)	Discusses the steps involved in Data Analysis Process.	10	U1
3(b)	Compare and Contrast Traditional Analytics Structure to Modern Analytics Architecture.	10	U1
4(a)	Discuss different types of Time Series Data Analysis along with its Major Application area.	10	U2
4(b)	Differentiate different types of support vector and kernel methods of Data Analysis	10	U2
5(a)	Discuss the Components of a General Stream Processing Model. List few sources of Streaming Data	10	U3
5(b)	Explain and apply Flajolet-Martin algorithm on the following stream of data to identify unique elements in the stream. S=1,3,2,1,2,3,4,3,1,2,3,1S=1,3,2,1,2,3,4,3,1,2,3,1 Given: h(x)=(6x+1) mod 5	10	U3
6(a)	Differentiate between CLIQUE and ProCLUS clustering	10	U4
6(b)	Tid | Items bought 10 | Beer, Nuts, Diaper 20 | Beer, Coffee, Diaper 30 | Beer, Diaper, Eggs 40 | Nuts, Eggs, Milk 50 | Nuts, Coffee, Diaper, Eggs, Milk Find all the Association rule from the above given Transaction with Given minsup = 50%, minconf = 50 %.	10	U4
7(a)	Explain the working of Hadoop Distributed File Systems.	10	U5
7(b)	List and explain five R function used in Descriptive Statistics	10	U5

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