Term Evaluation (Even) Semester Examination March 2025

Roll no.............................

Name of the Course and semester: BCA
Name of the Paper: Big Data Analytics
Paper Code: TBC405(1)

Time: 1.5 hour

Maximum Marks: 50

Note:
- *(i)* Answer all the questions by choosing any one of the sub questions
- *(ii)* Each question carries 10 marks.
- *(iii)* Please specify COs against each question.

Q1.   **(10 Marks)**
a.   Explain Bid Data and discuss its various sources.   **(CO1)**

OR

b.   Differentiate between structured and unstructured data based on factors data size, computation, performance, data form, data storage model.   **(CO1)**

Q2.   **(10 Marks)**
a.   Suppose you are a Data Analyst and want to analyze Surveillance System data then, explain various processes involved in Data Analytics.   **(CO1)**

OR

b.   Discuss the contribution of Big Data Analytics in Health Care System.   **(CO1)**

Q3.   **(10 Marks)**
a.   Explain the basic requirement of a Big Data Storage. Differentiate between Horizontal and Vertical Scaling and which type of scaling is done in storing Big Data.   **(CO1)**

OR

b.   Explain High Performance Architecture also discuss its various layers.   **(CO1)**

Q4.   **(10 Marks)**
a.   Explain which type of learning is suitable for Tumor Prediction Application also describe the type of dataset required for dataset?   **(CO2)**

OR

b.   Using K-means clustering algorithm cluster the following dataset into 3 Cluster, where the centroids are (1,0), (2,8), (3,4)   **(CO2)**

	Data Points
1	(1,2)
2	(1,0)
3	(2,8)
4	(3,2)
5	(1,6)
6	(2,10)
7	(3,9)
8	(4,2)
9	(2,4)
10	(3,4)

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Q5.   (10 Marks)

a.   Discuss various nodes in Decision Tree with an example also discuss the advantages of
Decision Tree.   **(CO2)**

OR

b.   The Dataset is about stolen vehicles. Use Naïve Bayes for predicting new data (Color=Red,
Type=SUV, Origin=Domestic)   **(CO2)**

Color	Type	Origin	Stolen
Red	Sports	Domestic	Yes
Red	Sports	Domestic	No
Red	Sports	Domestic	Yes
Yellow	Sports	Domestic	No
Yellow	Sports	Imported	Yes
Yellow	SUV	Imported	No
Yellow	SUV	Imported	Yes
Yellow	SUV	Domestic	No
Red	SUV	Imported	No
Red	Sports	Imported	Yes