BTS–VI–04.18 –0684 Reg. No. | | | | | | | | |

B

B.Tech. Degree VI Semester Examination April 2018

CS 15-1604 DATA MINING

(*2015 Scheme*)

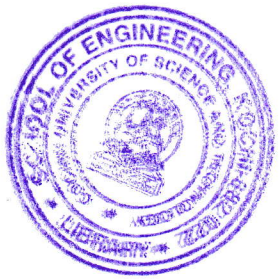
Time : 3 Hours Maximum Marks : 60

PART A

(Answer *ALL* questions)

(10 × 2 = 20)

I. (a) Explain data normalization and integration.
(b) Distinguish supervised and unsupervised learning with examples.
(c) Explain the structure of a multidimensional database.
(d) Explain SVM with an example.
(e) Explain the basic idea behind association rules mining.
(f) What is hierarchical clustering? Explain with example.
(g) Write a note on time series analysis.
(h) What are 3V's of big data?
(i) Explain the hadoop ecosystem.
(j) Write notes on HBase.



PART B

(4 × 10 = 40)

II. Explain the various applications of text and web mining in detail, with examples for each. (10)

OR

III. Explain the various stages in data mining with diagram and examples. (10)

IV. Explain the apriori association rules mining with respect to a live transaction data set? Make your own assumptions. (10)

OR

V. Consider the following dataset. Using Naïve Bayes classifier classify a Red domestic SUV. Clearly apply NB formulae. (10)

Example No.	Color	Type	Origin	Stolen
1.	Red	Sports	Domestic	Yes
2.	Red	Sports	Domestic	No
3.	Red	Sports	Domestic	Yes
4.	Yellow	Sports	Domestic	No
5.	Yellow	Sports	Imported	Yes
6.	Yellow	SUV	Imported	No
7.	Yellow	SUV	Imported	Yes
8.	Yellow	SUV	Domestic	No
9.	Red	SUV	Imported	No
10.	Red	Sports	Imported	Yes

VI. (a) Explain any one density based clustering algorithm. (5)
(b) What are the different types of clustering? Explain the context of each of them. (5)

OR

VII. Distinguish K-Means and KNN with examples. (10)

VIII. Explain the architecture for distributed computing in hadoop including both the data storage and job processing architecture. (10)

OR

IX. (a) What is the map reduce framework? How can you write a summary of a text book of 10 chapters using the map reduce concept? (5)
(b) Explain the map reduce implementation of the word count program in JAVA with examples and diagrams. (5)

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