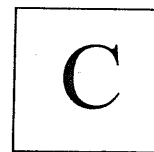


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B.Tech. Degree VI Semester Special Supplementary Examination November 2022

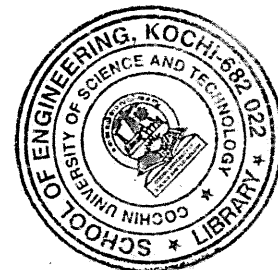
CS 19-202-0604 DATA MINING
(2019 Scheme)

Time: 3 Hours

Maximum Marks: 60

Course Outcome

On successful completion of the course, the students will be able to:



- CO1: Analyze various types of data, its collection and cleaning.
 CO2: Illustrate and analyze various applications of data mining.
 CO3: Analyze and compare various classification models in data mining.
 CO4: Understand developments in big data technologies.
 CO5: Familiarize the concepts of machine learning using R/Python.
 CO6: Analyze and make use of deep learning using R/Python.

Bloom's Taxonomy Levels (BL): L1 – Remember, L2 – Understand, L3 – Apply, L4 – Analyze, L5 – Evaluate,
 L6 – Create

PO – Programme Outcome

PART A

(Answer **ALL** questions)

	(8 × 3 = 24)	Marks	BL	CO	PO
I. (a) What is unsupervised learning? Give examples.	3	L2	2	1,3,5	
(b) What are rollup and drill down operations?	3	L3	1	1,5,2	
(c) What is association rule mining? Give examples.	3	L5	3	2,8,2	
(d) Define support and confidence with examples.	3	L1	2	1,3,5	
(e) What are the two important parameters for DBSCAN algorithm? Explain with diagrams.	3	L2	2	1,3,5	
(f) What is linear regression? Give examples.	3	L4	2	1,3,5	
(g) What are the various applications of cloud services?	3	L3	4	5,8,2	
(h) Write a note on HBase.	3	L2	4	5,8,2	

PART B

(4 × 12 = 48)

II.	Explain the various stages of data mining, with examples for each.	12	L1	2	1,3,5
OR					
III. (a)	Explain the mean and mode substitution in data preprocessing.	6	L3	1	1,5,2
(b)	Explain the various types of data normalization techniques.	6	L2	1	1,5,2
IV. (a)	Explain working of Naive Bayes classifier with examples.	10	L6	3	2,8,2
(b)	How do we analyze the performance of a decision tree?	2	L4	3	2,8,2
OR					
V. (a)	How do we evaluate performance of back propagation algorithm?	10	L6	3	2,8,2
(b)	How does sigmoid function work? Explain with diagrams.	2	L5	3	2,8,2

(P.T.O.)

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		Marks	BL	CO	PO
VI.	What are the different types of clustering algorithms? Explain with examples.	12	L2	2	1,3,5
OR					
VII.	(a) What are applications of graph mining?	4	L1	2	1,3,5
	(b) How does bottom up hierarchical clustering algorithm work for planning closest cities using an adjacency matrix?	8	L3	2	1,3,5
VIII.	(a) Describe the various data bases used for big data with examples.	6	L1	4	5,8,2
	(b) Distinguish HIVE and HBase.	6	L2	4	5,8,2
OR					
IX.	(a) What are the various models and applications of deep learning?	6	L2	6	1,5,2
	(b) How does CNNs improve feature extraction process?	6	L2	5	1,5,2

Blooms's Taxonomy Levels

L1 - 20%, L2 - 37%, L3 - 18%, L4 - 4%, L5 - 4%, L6 - 17%.
