BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: B.Tech   SEMESTER : VII
BRANCH: BT/CIVIL   SESSION : MO/2023

SUBJECT: IT426 DATA MINING CONCEPTS & TECHNIQUES

TIME: 3 Hours   FULL MARKS: 50

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. **Before attempting the question paper, be sure that you have got the correct question paper.**
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

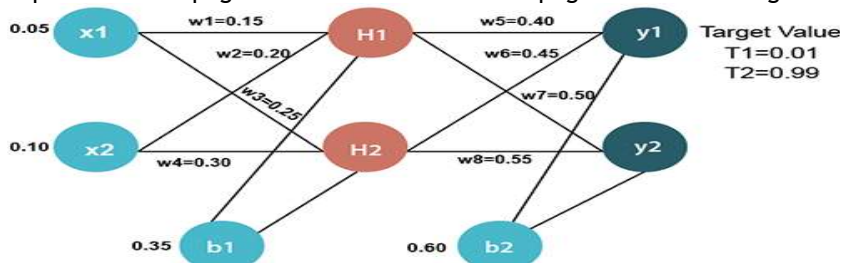
Q.1(a)   What are the functions issues in the data minin?   [5]
Q.1(b)   Describe different preprocessing techniques in data mining.   [5]

Q.2(a)   What is the data warehouse? Explain   [5]
Q.2(b)   What is the difference between OLTP and OLAP?   [5]

Q.3(a)   Explain the Apriori algorithm for frequent item set mining with an example. [5]
Q.3(b)   A database has five transactions. Let min sup=60% and min confidence=50%. Find all frequent   [5]
         patterns using FP-growth algorithm.

Tran_ID	Items Brought
10	Beer, Nuts, Diapers
20	Beer, coffee, Diapers, Nuts
30	Beer, Diapers, Eggs
40	Beer, Nuts, Eggs, Milk
50	Nuts, coffee, Diapers, Eggs, Milk

Q.4(a)   Explain Back Propagation and find the Back Propagation of Error of given values   [5]

Q.4(b)   Explain classification accuracy, Precision, Error rate and Recall.   [5]

Q.5(a)   What is the clustering? Explain with a suitable example.   [5]
Q.5(b)   Explain Density Based Clustering Algorithm (DBSCAN).   [5]