1. Which algorithm is an example of a hierarchical clustering algorithm?
a) Apriori
b) DBSCAN
c) FP growth
d) BIRCH

Answer: d) BIRCH

Explanation: BIRCH (Balanced Iterative Reducing and Clustering using Hierarchies) is a hierarchical clustering algorithm designed for clustering large datasets.

2. Which algorithm is used for partitional clustering?
a) CURE
b) FP growth
c) Apriori
d) DBSCAN

Answer: a) CURE

Explanation: CURE (Clustering Using Representatives) is a partitional clustering algorithm that assigns each point to the cluster whose nearest representative point has the least distance.

3. Which algorithm is known for its capability to handle noise and outliers well?
a) BIRCH
b) FP growth
c) Apriori
d) DBSCAN

Answer: d) DBSCAN

Explanation: DBSCAN (Density-Based Spatial Clustering of Applications with Noise) is capable of discovering clusters of arbitrary shape and is robust to noise and outliers.

4. Which algorithm is used for mining association rules in large databases using a level-wise approach?
a) Apriori
b) CURE
c) BIRCH
d) DBSCAN

Answer: a) Apriori

Explanation: Apriori is a classic algorithm used for mining association rules by employing a level-wise search approach to discover frequent itemsets.

5. Which algorithm utilizes the concept of minimum support to prune infrequent itemsets efficiently?
a) CURE
b) DBSCAN
c) FP growth
d) BIRCH

Answer: c) FP growth

Explanation: FP growth (Frequent Pattern growth) algorithm utilizes a frequent pattern tree (FP-tree) structure and the concept of minimum support to efficiently mine frequent itemsets

without candidate generation.

6. Which clustering algorithm is suitable for handling large datasets by forming a hierarchical structure of clusters?
a) Apriori
b) DBSCAN
c) BIRCH
d) FP growth

Answer: c) BIRCH

Explanation: BIRCH (Balanced Iterative Reducing and Clustering using Hierarchies) is designed specifically for clustering large datasets by forming a hierarchical structure of clusters.

7. Which algorithm follows a density-based approach to discover clusters of arbitrary shapes?
a) Apriori
b) FP growth
c) DBSCAN
d) CURE

Answer: c) DBSCAN

Explanation: DBSCAN (Density-Based Spatial Clustering of Applications with Noise) follows a density-based approach, which allows it to discover clusters of arbitrary shapes based on density connectivity.

8. Which algorithm is known for its capability to handle skewed datasets efficiently?

a) BIRCH
b) FP growth
c) DBSCAN
d) Apriori

Answer: b) FP growth

Explanation: FP growth (Frequent Pattern growth) algorithm is efficient for handling skewed datasets as it utilizes a tree structure to represent the database, reducing the need for multiple database scans.

9. Which clustering algorithm requires the specification of the minimum number of points within a neighborhood to form a cluster?
a) BIRCH
b) DBSCAN
c) CURE
d) Apriori

Answer: b) DBSCAN

Explanation: DBSCAN (Density-Based Spatial Clustering of Applications with Noise) requires the specification of the minimum number of points within a neighborhood (minPts) to form a cluster.

10. Which algorithm is primarily used for finding frequent itemsets in transactional databases?
a) BIRCH
b) Apriori

c) CURE
d) DBSCAN

Answer: b) Apriori

Explanation: Apriori algorithm is primarily used for finding frequent itemsets in transactional databases, which is essential for association rule mining.

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