- 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

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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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