

Lesson 5 Quiz

TOTAL POINTS 4

1. In the DBSCAN algorithm, given Eps and Minpts, if a point p is density-reachable from a point q, which of the following statements are correct? Select all that apply.

1 point

- ☐ Point p must be directly density-reachable from q.
- ☒ Point q is density-connected to p.
- ☒ If there exists one point o density-reachable from p, then o is also density-reachable from q.
- ☐ Point q is also density-reachable from p.

2. In the DBSCAN algorithm, suppose $\text{eps} = 4\text{cm}$ and $\text{Minpts} = 5$. Randomly select two points p, q from the observed data points. We have $\text{dist}(p, q) = 1\text{cm}$. Which of the following statements are correct? Select all that apply.

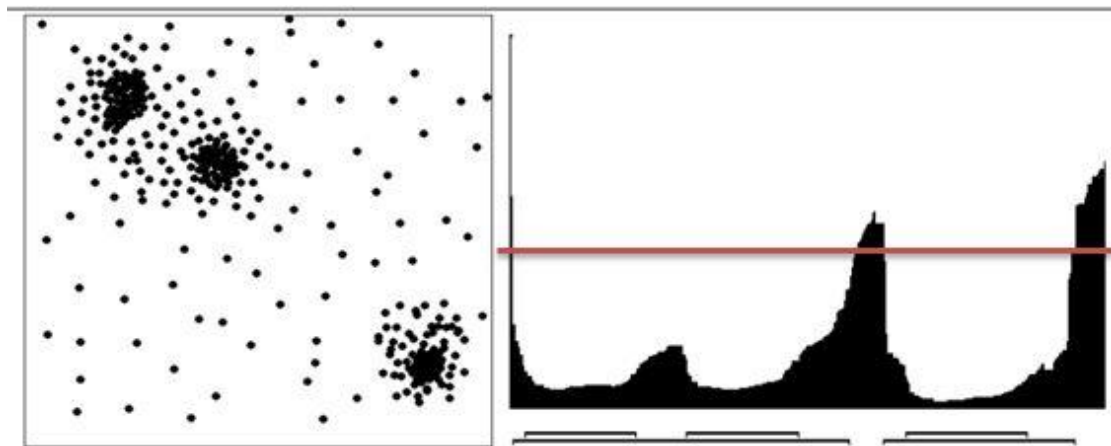
1 point

- ☒ Points p and q may not belong to any clusters.
- ☐ Points p and q must be in the same cluster.
- ☐ Points p and q must be in different clusters.
- ☒ Points p and q may be in different clusters.

3.

1 point

Given the following synthetic data set (left) and the reachability-plot (right), how many clusters would there be if we set the threshold to be the red line in the right figure?



- ☐ 1
- ☒ 2
- ☐ 3
- ☐ 4
- ☐ 5

4. Considering the CLIQUE clustering algorithm, which of the following statements are correct? Select all that apply.

1 point

- ☐ Any point that belongs to a cluster in a 1-D subspace A must belong to some cluster (dense region) in any 2-D subspace that includes A.
- ☒ Any point that belongs to a cluster in a 1-D subspace A may not belong to any clusters (dense regions) in any 2-D subspaces that includes A.
- ☐ Any point that does not belong to a cluster in a 1-D subspace A may belong to some cluster (dense region) in any 2-D subspace that includes A.
- ☒ Any point that does not belong to a cluster in a 1-D subspace A must not belong to any clusters (dense regions) in any 2-D subspaces that includes A.

☐ I, **BAL KRISHNA NYAUPANE**, understand that submitting work that isn't my own may result in

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