**1. Apriori algoritm (2p+1p+1p+1p+1p=6p)**

1. Explain the Apriori algorithm. You may want to give the algorithm’s pseudocode.
2. Sketch a proof of the correctness of the Apriori algorithm.
3. Explain how and where we incorporate a monotonic constraint into the Apriori algorithm.
4. Explain how and where we incorporate an antimonotonic constraint into the Apriori algorithm.
5. What role does the Apriori algorithm play in the search for association rules ?

**2. FP grow algorithm (2p+1p+1p+1p=5p)**

1. Explain the FP grow algorithm. You may want to give the algorithm’s pseudocode.
2. Explain how and where we incorporate a monotonic constraint into the FP grow algorithm.
3. Explain how and where we incorporate an antimonotonic constraint into the FP grow algorithm.
4. What is the main advantage that the FP grow algorithm has over the Apriori algorithm ?

**3. Constraints (1p+1p+1p=3p)**

1. Give three examples of constraints that are monotone. Explain your answer.
2. Give three examples of constraints that are antimonotone. Explain your answer.
3. Give three examples of constraints that are neither monotone nor antimonotone but that

are convertible monotone and convertible antimonotone (i.e. strongly convertible). Explain your answer.