Kunal Mehta
50352960
kunalkam

Quiz 8

1. The Markov assumption for a dynamic Bayesian Network is that the next time point is independent of everything in the time series that occurred before the current point. This is what the term memory-less means, since there is zero significance of the history of the variable, all that matters is the current point.
2. True/False Questions
    a. True.
    Whether A is on or off does not affect B being on or off, and the converse is true as well.
    b. False.
    Given that C is on, knowing if B is on or off affects if A is on or off. If B is off, it is a must that A must be on, or else C would be off. If B is on, A can be either on or off.
    c. True.
    Given that C is off, it implies that both A and B are off. Therefore, knowing the condition of B doesn't affect in any way the condition of A.
    d. False.
    Given that B is off, knowing if C is on or off will determine if A is on or off. C is on if either A or B are on, and given that B is off, C will be on only if A is on, and off if A is off. Therefore, A depends on C if B is given to be off.
    e. True.
    Given that B is on, C is definitely on. Therefore, A being on or off is not affected by knowing whether C is on or off. A could be either on or off, regardless of C since we are given that B is on.