Assignment 4: Machine Learning

1A. What are Graphical Models? Briefly explain the importance of Graphical models?
1B. Explain the Naïve bayes classifier with an example.

2A. Briefly explain the Belief Propagation with an example.
2B. Briefly explain the Hidden Markov Model with an example.

3A. Propose a suitable goodness measure that can be used in learning graph structure as a state-space search. What are suitable operators?
3B. Discuss the Linear Regression with an example.

4. Generally, in a newspaper, a reporter writes a series of articles on successive days related to the same topic as the story develops. How can we model this using a graphical model?