Question 12

(a) Dynamic Networks
Q: Describe the training regime used in Cascade Correlation learning. Why is it advantageous to have more than one candidate unit when training?

(b) Competitive Learning
Q: Describe the architecture of a competitive learning system. What is the constraint on the weights incoming to (non-input) unit $j$.

(c) Radial Basis Function Networks
Q: What is a radial basis function node? Describe in your answer the parameters of an RBF node, and their significance.

(d) Simulated Annealing
Q: What is an annealing schedule? What is its purpose in simulated annealing?

(e) Boltzmann Machine
Q: What is the function of hidden units in the Boltzmann machine? With what probability is a flip of neuron $j$ from state $x_j$ to state $-x_j$ accepted, at temperature $T$?