Tutorial week 6 (MLP)

1. What are the advantages of MLP? [2 marks]

MLP is able to adapt and learn how to do tasks based on data given for training.
MLP is also proven to be a universal approximator, able to model any given function.

2. Discuss the phases of BP learning? [4 marks]

In the propagation phase, the input of training pattern is propagated forward to generate output.
In the weight update phase, the error terms and derivatives are calculated to readjust the weights for each node.

3. Identify the areas where can we apply MLP in problem solving. [2 marks]

Fitness approximation, pattern recognition, support vector machine etc.

4. Name the learning rule of MLP. [1 mark]

Hebbian learning rule

5. Describe the weaknesses of BP with regard to MLP. [3 marks]

Stuck at local minimum, slow convergence, and convergence might not even happen.

6. Why is sigmoid function chosen for BP? [1 mark]

Because the activation function must be differentiable.