Question-1 answer

Deep learning is part of a broader family of machine learning methods based on artificial neural networks with representation learning. Learning can be supervised, semi-supervised or unsupervised.

Popular types of activation functions and when to use them

1. Binary Step
2. Linear
3. Sigmoid
4. Tanh
5. ReLU
6. Leaky ReLU
7. Parameterised ReLU
8. Exponential Linear Unit
9. Swish
10. Softmax

Question-2 ,Answer

1. Supervised learning technique deals with the labelled data where the output data patterns are known to the system. As against, the unsupervised learning works with unlabeled data in which the output is just based on the collection of perceptions.
2. When it comes to the complexity the supervised learning method is less complex while unsupervised learning method is more complicated.
3. The supervised learning can also conduct offline analysis whereas unsupervised learning employs real-time analysis.
4. The outcome of the supervised learning technique is more accurate and reliable. In contrast, unsupervised learning generates moderate but reliable results.
5. Classification and regression are the types of problems solved under the supervised learning method. Conversely, unsupervised learning includes clustering and associative rule mining problems.