Deep Learning worksheet Solution

Answer 1: - Neural Networks

Answer 2: - None of the above

Answer 3: - option (c) i – v – iv – iii – ii

Answer 4: -Recurrent Neural Network

Answer 5: - input patterns keep on changing

Answer 6: - system can neither be stable nor plastic

Answer 7: - Both statements are true

Answer 8: -Recurrent neural networks

Answer 9: -Learning rate is slow

Stuck at local minima

Answer 10: -Convolution function

Sigmoid function

Answer 11: -[Deep Learning](https://www.simplilearn.com/tutorials/deep-learning-tutorial/what-is-deep-learning) involves taking large volumes of structured or unstructured data and using complex algorithms to train neural networks. It performs complex operations to extract hidden patterns and features (for instance, distinguishing the image of a cat from that of a dog).

Answer 12: -Reinforcement learning is an area of machine learning concerned with how software agents ought to take actions in an environment in order to maximize the notion of cumulative reward. Reinforcement learning is one of three basic machine learning paradigms, alongside supervised learning and unsupervised learning.

Answer 13: -**Machine learning**is a subset of artificial intelligence associated with creating algorithms that can change themselves without human intervention to get the desired result – by feeding themselves through structured data.

**Deep learning** is a subset of machine learning where algorithms are created and function similarly to machine learning, but there are many levels of these algorithms, each providing a different interpretation of the data it conveys. This network of algorithms is called artificial neural networks. In simple words, it resembles the neural connections that exist in the human brain.

Answer 14: -In [machine learning](https://en.wikipedia.org/wiki/Machine_learning), the perceptron is an algorithm for [supervised learning](https://en.wikipedia.org/wiki/Supervised_classification) of [binary classifiers](https://en.wikipedia.org/wiki/Binary_classification). A binary classifier is a function which can decide whether or not an input, represented by a vector of numbers, belongs to some specific class. It is a type of [linear classifier](https://en.wikipedia.org/wiki/Linear_classifier), i.e. a classification algorithm that makes its predictions based on a [linear predictor function](https://en.wikipedia.org/wiki/Linear_predictor_function) combining a set of weights with the [feature vector](https://en.wikipedia.org/wiki/Feature_vector).

Answer 15: -In [machine learning](https://en.wikipedia.org/wiki/Machine_learning), the perceptron is an algorithm for [supervised learning](https://en.wikipedia.org/wiki/Supervised_classification) of [binary classifiers](https://en.wikipedia.org/wiki/Binary_classification). A binary classifier is a function which can decide whether or not an input, represented by a vector of numbers, belongs to some specific class.[[1]](https://en.wikipedia.org/wiki/Perceptron#cite_note-largemargin-1) It is a type of [linear classifier](https://en.wikipedia.org/wiki/Linear_classifier), i.e. a classification algorithm that makes its predictions based on a [linear predictor function](https://en.wikipedia.org/wiki/Linear_predictor_function) combining a set of weights with the [feature vector](https://en.wikipedia.org/wiki/Feature_vector).

[Machine Learning](https://www.geeksforgeeks.org/getting-started-machine-learning/) : Machine Learning is the learning in which machine can learn by its own without being explicitly programmed. It is an application of AI that provide system the ability to automatically learn and improve from experience. Here we can generate a program by integrating input and output of that program. One of the simple definitions of the Machine Learning is ***Machine Learning is said to learn from experience E w.r.t some class of task T and a performance measure P if learners’ performance at the task in the class as measured by P improves with experiences.***