***( MACHINE LEARNING WORKSHEET-7)***

ANSWER-1) A) GridSearchCV()

ANSWER-2) C) Gradient Boosting

ANSWER-3) A) The regularization will increase

ANSWER-4) A) It regularizes the decision tree by limiting the maximum depth up to which a tree can be grown.

ANSWER-5) D)None of the above

ANSWER-6) B) Gradient Descent algorithm can keep oscillating around the optimal solution and may not settle.

ANSWER-7) A) Bias will increase, Variance decrease

ANSWER-8) B) model is overfitting

ANSWER-9)

ANSWER-10) The random forest has complex visualization and accurate predictions, but the decision tree has simple visualization and less accurate predictions. The advantages of Random Forest are that it prevents overfitting and is more accurate in predictions.

ANSWER-11) Scaling can make a difference between a weak machine learning model and a better one. The most common techniques of feature scaling are Normalization and Standardization. Normalization is used when we want to bound our values between two numbers, typically, between [0,1] or [-1,1].

ANSWER-12) .We can use fixed learning rate during training without worrying about learning rate decay.

* It has straight trajectory towards the minimum and it is guaranteed to converge in theory to the global minimum if the loss function is convex and to a local minimum if the loss function is not convex.

ANSWER-13) Accuracy is not a good metric for imbalanced datasets.

This model would receive a very good accuracy score as it predicted correctly for the majority of observations, but this hides the true performance of the model which is objectively not good as it only predicts for one class.

ANSWER-14) such as search engines, and also for many kinds of [machine learning](https://deepai.org/machine-learning-glossary-and-terms/machine-learning) models, The F-score, also called the F1-score, is a measure of a model’s accuracy on a dataset. It is used to evaluate binary classification systems, which [classify](https://deepai.org/machine-learning-glossary-and-terms/classifier) examples into ‘positive’ or ‘negative’.

The F-score is a way of combining the [precision and recall](https://deepai.org/machine-learning-glossary-and-terms/precision-and-recall) of the model, and it is defined as the [harmonic mean](https://deepai.org/machine-learning-glossary-and-terms/harmonic-mean) of the model’s precision and recall.

The F-score is commonly used for evaluating information retrieval systems in particular in [natural language processing](https://deepai.org/machine-learning-glossary-and-terms/natural-language-processing).

It is possible to adjust the F-score to give more importance to precision over recall, or vice-versa. Common adjusted F-scores are the F0.5-score and the F2-score, as well as the standard F1-score.

ANSWER-15) The fit() method helps in fitting the data into a model, transform() method helps in transforming the data into a form that is more suitable for the model. Fit\_transform() method, on the other hand, combines the functionalities of both fit() and transform() methods in one step.