Answer 1: Machine Learning (ML) is a branch of artificial intelligence (AI) that enables computers to learn from data, improve their performance over time without being explicitly programmed, and make predictions or decisions based on patterns in the data.

Answer 4:Gradient Descent is an optimization algorithm used to minimize a loss function (or cost function). It adjusts the model's parameters iteratively by moving in the direction of the negative gradient of the function, which leads to a local minimum or optimal solution.

Answer 6: XGBoost (Extreme Gradient Boosting) is an advanced, efficient implementation of gradient boosting, a technique used for supervised learning. It builds an ensemble of decision trees, where each tree corrects the errors of the previous ones. It is known for its speed, accuracy, and scalability in handling large.