**[Que-50.34] - Describe the logistic regression model and its assumptions.**

### **Logistic Regression Model and Its Assumptions**

Logistic regression is a linear model used for binary classification problems. It predicts the probability of a binary outcome using a logistic function. The key assumptions of logistic regression include:

1. **Linearity of Logits**: The logit (log-odds) of the outcome is a linear combination of the predictor variables.
2. **Independence of Errors**: Observations are independent of each other.
3. **No Multicollinearity**: Predictor variables are not highly correlated with each other.
4. **Large Sample Size**: Provides more reliable estimates and accurate p-values.