4.a) The best model is the LDA.

b) LDA has a high accuracy value of around 97%. Others are not as accurate as LDA model because:

NB assumes that all features are independent, which is a rare case in the real-world scenario and our Iris data set.

Linear regression assumes a linear relationship between the Iris features and assumes independence between the attributes.

Polynomial regression may give us an underfitting or overfitting result that will lead to errors in the prediction and we also must carefully choose the degree number for the best possible result.

KNN requires normalization and standardization. Also, the large dataset is tough for the model to handle.

QDA needs more parameters for producing a better result and there will be separate covariance matrix for every class.

LDA assumes normal distribution assumption on the features and it’s not best with few variables.