Question-1:

What is the optimal value of alpha for ridge and lasso regression? What will be the changes in the model if you choose double the value of alpha for both ridge and lasso? What will be the most important predictor variables after the change is implemented?

Answer: Optimal value of alpha for ridge regression: 0.9

Optimal value of alpha for lasso regression: 0.001

Question-4:

How can you make sure that a model is robust and generalisable? What are the implications of the same for the accuracy of the model and why?

Answer: A model is considered to be robust if the model is stable, i.e. does not change drastically upon changing the training set. The model is considered generalizable if it does not overfit the training data, and works well with new data. Its implication in terms of accuracy is that a robust and generalizable model will perform equally well on both training and test data i.e. the accuracy does not change much for training and test data.