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?

Optimal Value of Alpha: The computed optimal value of alpha for Ridge Regression is 0.01.

The computed optimal value of alpha for Lasso Regression is 0

Ridge Regression –

There is slight change in test values when the alpha values are doubled.

Lasso-

There is no change when the value of alpha is doubled.

Important predictor variables –

Overallcondt

Overallqual

Question 2

You have determined the optimal value of lambda for ridge and lasso regression during the assignment. Now, which one will you choose to apply and why?

Lasso Regression.

Because the r2 score of lasso regression is higher compared to ridge regression.

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?

To Make sure the model is robust and generalisabel we can divide the data set into training and test sets to overcome the overfitting.

We can use techniues like L1 and L2 to lessen the overfitting and improve generalisation.