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?

The Optimum value of alpha or lambda for ridge regression is 5, and optimum value of lasso regression is 0.0002.
If the Optimum value of lamb is doubled it will lead to undercutting. GrLivArea is the most important predictor variable after the change is implemented.

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?

Comparatively, Ridge and Lasso performed almost similar but Ridge is slightly better in terms generalising with test data. Hence the preference would be to Ridge Regression on this Data Set.

Question 3
After building the model, you realised that the five most important predictor variables in the lasso model are not available in the incoming data. You will now have to create another model excluding the five most important predictor variables. Which are the five most important predictor variables now?

The 5 most important variable before any change are
GrLivArea
OverallQual
RoofMatl_WdShngl
TotalBsmtSF
BsmtFinSF1

If these are removed/dropped, the next most important variable will be

Neighborhood_NoRidge
GarageArea
OverallCond
Neighborhood_NridgHt
2ndFlrSF

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?

If Model does not generalise well, it will lead to prediction errors that will lead to Business implications.