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?

Ans) :

In case of Ridge Regression optimal alpha = 20

In case of Lasso Regresson optimal alpha = 100

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?

Ans ) I will go with Lasso regression , considering the Lasso regression helps in even feature selection along with regularization thereby simplifying the model.

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?

Ans)

The next 5 variables based on RFE ranks would be part of the important predictor variables

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?

Ans) We go by the R2 score and any R2 score 0.85 is good for prediction.