1. C
2. B
3. C
4. B
5. B
6. A,D
7. B,C
8. D
9. A,B,C
10. The adjusted R2 will penalize you for adding independent variables (K in the equation) that do not fit the model. Why? In regression analysis, it can be tempting to add more variables to the data as you think of them. Some of those variables will be significant, but you can't be sure that significance is just by chance. The adjusted R2 will compensate for this by that penalizing you for those extra variables. While values are usually positive, they can be negative as well. This could happen if your R2 is zero; After the adjustment, the value can dip below zero. This usually indicates that your model is a poor fit for your data. Other problems with your model can also cause sub-zero values, such as not putting a constant term in your model.
11. Similar to the lasso regression, ridge regression puts a similar constraint on the coefficients by introducing a penalty factor. However, while lasso regression takes the magnitude of the coefficients, ridge regression takes the square
12. The Variance Inflation Factor (VIF) measures the severity of multicollinearity in regression analysis. The suitable value for VIF depends on the type of data and data domain.
13. To ensure that the gradient descent moves smoothly towards the minima and that the steps for gradient descent are updated at the same rate for all the features, we scale the data before feeding it to the model.
14. To check the goodness of fit for linear regression we can use r2, adjustedr2, mse,rmse and mae.
15. Accuracy: 0.88
    Recall or sensitivity: 0.8
    Precicion: 0.95
    Specificity: 0.82