1) True-False: Is Logistic regression a supervised machine learning algorithm?

A) TRUE
B) FALSE

2) True-False: Is it possible to apply a logistic regression algorithm on a 3-class Classification problem?

A) TRUE
B) FALSE

3) Which of the following methods do we use to best fit the data in Logistic Regression?

A) Least Square Error
B) Maximum Likelihood
C) Jaccard distance
D) Both A and B

4) One of the very good methods to analyze the performance of Logistic Regression is AIC, which is similar to R-Squared in Linear Regression. Which of the following is true about AIC?

A) We prefer a model with minimum AIC value
B) We prefer a model with maximum AIC value
C) Both but depend on the situation
D) None of these

5) Standardisation of features is required before training a Logistic Regression.

A) TRUE
B) FALSE

6) Consider the following model for logistic regression: $P(\mathbf{y} =1|\mathbf{X}, \mathbf{w})= g(w0 + w1X)$
where g(z) is the logistic function.

In the above equation the $P(\mathbf{y} =1|\mathbf{X}, \mathbf{w})$, viewed as a function of $\mathbf{X}$, that we can get by changing the parameters $\mathbf{w}$.

What would be the range of p in such a case?

A) [0, inf)
B) (-inf, 0]
C) [0, 1]
D) (-inf, inf)

7) In the previous question, which function would make p lie between [0,1]?

A) Logistic function
B) Log likelihood function
C) Mixture of both
D) None of them

8) Why can't we use Mean Square Error (MSE) as a cost function for logistic regression?

9) How to interpret the results of a logistic regression model? Or, what are the meanings of the beta parameters in a logistic regression model?

10) What is the importance of a baseline in a classification problem? Discuss in groups.