Logistic Regression Interview Questions

These questions can be found on our website, https://vitalflux.com, on this page, 30 Logistic Regression Questions and Practice Tests.

1. Logistic regression is used to predict _____ valued output?
   - Continuous
   - Categorical
2. How much marks a strudent can get in a competitive exam based on hours of study can be solved using _____ regression model
   - Multi-linear
   - Logistic
3. Logistic regression is _____ when the observed outcome of dependent variable can have only two values such as 0 and 1 or success and failure
   - Binomial
   - Multinomial
   - Ordinal
4. Whether a strudent will pass or fail in the competitive exam based on hours of study can be solved using _____ regression model
   - Multi-linear
   - Logistic
5. _____ regression can be termed as a special case of _____ regression when the outcome variable is categorical
   - Logistic, Linear
   - Linear, Logistic
6. In logistic regression, the goal is to predict _____
   - Actual value of outcome dependent variable
   - Odds of outcome dependent variable
7. Which of the following can be used to evaluate the performance of logistic regression model?
   - Adjusted R-Squared
   - AIC
8. Which of the following is link function in logistic regression
   - Identity
   - Logit
9. Logistic regression is _____ when the observed outcome of dependent variable can have multiple possible types
   - Binomial
   - Multinomial
   - Ordinal
10. In logistic regression, following technique is used to measure the goodness of the fit
    - Sum of squares calculations
    - Deviance calculations
11. Which of the following can be used to evaluate the performance of logistic regression model?

- ○ AIC
- ○ Null and Residual Deviance
- ○ Both of the above
- ○ None of the above
12. Given two model with different AIC value, which one would be preferred model?
   - ○ One with higher AIC value
   - ○ One with lower AIC value
13. Deviance is a measure of difference between a _____ model and the _____ model
   - ○ saturated, fitted
   - ○ Fitted, saturated
14. Logistic regression is _____ when the observed outcome of dependent variable are ordered
   - ○ Binomial
   - ○ Multinomial
   - ○ Ordinal
15. Logit transformation is log of _____
   - ○ Odds of the event happening for different levels of each independent variable
   - ○ Ratio of odds of the event happening for different levels of each independent variable
16. Logistic function is _____
   - ○ Dependent variable equalling a given case
   - ○ Probability that dependent variable equals a case
17. Deviance is is a function of _____
   - ○ Exponential function of likelihood ratio
   - ○ Logrithmic function of likelihood ratio
18. The odds of the dependent variable equaling a case (given some linear combination x of the predictors) is equivalent to _____
   - ○ Log function of the linear regression expression
   - ○ Exponential function of the linear regression function
19. Regression coefficients in logistic regression are estimated using _____
   - ○ Ordinary least squares method
   - ○ Maximum likelihood estimation method
20. _____ is analogous to _____ in linear regression
   - ○ Sum of squares calculations, deviance
   - ○ Deviance, sum of squares calculations
21. Deviance can be shown to follow _____
   - ○ t-distribution
   - ○ F-distribution
   - ○ Chi-square distribution
   - ○ None of the above
22. _____ value of deviance represents the better fit of model
   - ○ Higher
   - ○ Lower
23. If the model deviance is significantly _____ than the null deviance then one can conclude that the predictor or set of predictors significantly improved model fit
   - ○ Smaller
   - ○ Larger

24. Which of the following is analogous to R-Squared for logistic regression
    - Likelihood ration R-squared
    - McFadden R-squared
    - Cox and Snell R-Squared
    - All of the above
25. Estimation in logistic regression chooses the parameters that _____ the likelihood of observing the sample values
    - Minimizes
    - Maximizes
26. Which of the following tests can be used to assess whether the logistic regression model is well calibrated
    - Hosmer-Lemeshow test
    - ROC Curve
    - Both of the above
27. ROC related with ROC curve stands for _____
    - Regression Optimization Characteristic
    - Regression Operating Characteristic
    - Receiver Operating Characteristic
28. Which of the following is used to identify the best threshold for separating positive and negative classes
    - Hosmer-Lemeshow test
    - ROC Curve
    - Both of the above
29. ROC curve is a plot of _____ vs _____
    - Sensitivity, 1-specificity
    - 1-specificity, Sensitivity
30. _____ the value of AUC, better is the prediction power of the model
    - Lower
    - Higher