1. A simulation
   1. a probability distribution
   2. **imitates the operation of real world processes or systems with the use of models**
   3. a machine learning algorithm
   4. a test of hypothesis
2. In any Linear Programming Problem, which can be the task to be done?
   1. Predicting the cost
   2. Testing the hypothesis for difference in the cost
   3. **Minimizing the cost**
   4. None of Above
3. Which of the following can be an example of Poisson Distribution
   1. **Number of defects in a (product) piece**
   2. Height of Plants
   3. Weight of Plants
   4. Number of patients getting affected by Covid-19
4. Which of the following are non-parametric distributions?
   1. **Chi-square test for independence**
   2. T-test for means
   3. ANOVA
   4. F-test
5. The option of assuming equal variance or not is in the function of which of the following tests?
   1. Paired t-test
   2. **2 Samples independent t-test**
   3. Chi-Square Test for independence of attributes
   4. ANOVA
6. T-test assumes which of the distribution of the population data?
   1. Binomial Distribution
   2. T-Distribution
   3. Poisson Distribution
   4. **Normal Distribution**
7. For displaying the quartiles of a numeric variable which of the graphs can be used?
   1. Pie Chart
   2. **Box Plot**
   3. Line Chart
   4. Density Plot
8. Which of the coefficients can give describe the measure of peakedness or flatness of the distribution of a numeric variable?
   1. **Coefficient of Kurtosis**
   2. Coefficient of Skewness
   3. Coefficient of Variation
   4. Karl Pearson’s Correlation Coefficient
9. Which of the coefficients can give describe the measure of symmetry of the distribution of a numeric variable?
   1. Coefficient of Kurtosis
   2. **Coefficient of Skewness**
   3. Coefficient of Variation
   4. Karl Pearson’s Correlation Coefficient
10. Coefficient of correlation ranges between
    1. 0 to 1
    2. -Infinity to 1
    3. -Infinity to +Infinity
    4. **-1 to 1**
11. In simple exponential smoothing,
    1. **The forecast is the dot product of the decreasing weights(smoothing constant) and previous values**
    2. The forecast is the average of the previous values
    3. The forecast is the average of the decreasing weights(smoothing constant)
    4. The forecast is the average of previous some(span) values
12. In Moving average smoothing method,
    1. The forecast is the dot product of the decreasing weights(smoothing constant) and previous values
    2. The forecast is the average of the previous values
    3. The forecast is the average of the decreasing weights(smoothing constant)
    4. **The forecast is the average of previous some(span) values**
13. There are \_\_\_\_\_\_\_ smoothing constants for Holt’s Linear Trend Method(without damping)
    1. One
    2. **Two**
    3. Three
    4. Four
14. There are \_\_\_\_\_\_\_ smoothing constants for Holt-Winter’s Method(without damping)
    1. One
    2. Two
    3. **Three**
    4. Four
15. What is true about simulated data?
    1. **As the number of simulated data points increases that simulated data tends towards more realistic data**
    2. Smaller the number of simulated data points nearer we are with reality
    3. Smaller or more simulated data points does not matter about reality
    4. None of the Above is true
16. Auto-correlation is
    1. correlation between only two consecutive values in two different periods
    2. **correlation between the elements of a series and others from the same series separated from them by a given interval**
    3. correlation between two different varaibles
    4. None of Above
17. In ARIMA(p,d,q) models, the parameter p stands for
    1. **Order of Auto-Regressive model**
    2. Order of Differencing
    3. Order of Moving Average model
    4. Number of smoothing constants
18. In ARIMA(p,d,q) models, the parameter d stands for
    1. Order of Auto-Regressive model
    2. **Order of Differencing**
    3. Order of Moving Average model
    4. Number of smoothing constants
19. In ARIMA(p,d,q) models, the parameter q stands for
    1. Order of Auto-Regressive model
    2. Order of Differencing
    3. **Order of Moving Average model**
    4. Number of smoothing constants
20. For all the time series algorithms for measuring the accuracy of the predictions which of the evaluation metrics can be used?
    1. Area under ROC
    2. Log Loss
    3. Accuracy Score
    4. **Mean Square Error**
21. For finding area under ROC which two inputs are required for roc\_auc\_score function of scikit-learn?
    1. Predicted categorical value and actual value
    2. Predicted categorical value and predicted probabilities
    3. **Predicted probabilities and actual value**
    4. None of Above
22. The best number of clusters can be that number for which
    1. **Silhouette score is highest**
    2. Silhouette score is lowest
    3. Within Sums of Squares is Highest
    4. Mean Square Error is Highest
23. All the principal component scores are
    1. **Uncorrelated from each other**
    2. Highly correlated with each other
    3. Correlation here does not matter
    4. Having means bigger than 70
24. Colours in a heat map
    1. **Represent the magnitude of the values**
    2. Means of different columns
    3. Variances of different columns
    4. Skewness in the data
25. Mean of the Standard Normal Distribution is
    1. 1
    2. -1
    3. **0**
    4. infinity