51) What is unsupervised learning?

a) Number of groups may be known

b) Features of groups explicitly stated

c) Neither feature nor number of groups is known

d) None of the above

ANS:- c) Neither feature nor number of groups is known

52) Which of the following is not a machine learning algorithm?

a) SVM

b) SVG

c) Random Forest Algorithm

d) None of the above

ANS:- b) SVG

53) _____ is the scenario when the model fails to decipher the underlying trend in the input data

a) Overfitting

b) Underfitting

c) Both a and b

d) None of the above

ANS:- b) Underfitting

54) Real-Time decisions, Game AI, Learning Tasks, Skill acquisition, and Robot Navigation are applications of .....

a) Reinforcement learning

b) Supervised learning

c) Unsupervised Learning

d) None of the above

ANS:- a) Reinforcement learning

55) What is called the average squared difference between classifier predicted output and actual output?

a) Mean relative error

b) Mean squared error

c) Mean absolute error

d) Root mean squared error

ANS:- b) Mean squared error

56) Logistic regression is a ..... regression technique that is used to model data having a ..... outcome.

a) Linear, binary

b) Linear, numeric

c) Nonlinear, binary

d) Nonlinear, numeri

ANS:- b) Linear, numeric

57) You are given reviews of few netflix series marked as positive, negative and neutral. Classifying reviews of a new netflix series is an example of

A. supervised learning

B. unsupervised learning

C. semisupervised learning

D. reinforcement learning

ANS:- A. supervised learning

58) Following is powerful distance metrics used by Geometric model

A. euclidean distance

B. manhattan distance

C. both a and b

D. square distance

ANS:- C. both a and b

59) Which of the following techniques would perform better for reducing dimensions of a data set?

A. removing columns which have too many missing values

B. removing columns which have high variance in data

C. removing columns with dissimilar data trends

D. none of these

ANS:- B. removing columns which have high variance in data

60) Supervised learning and unsupervised clustering both require which is correct according to the statement.

A. output attribute.

B. hidden attribute.

C. input attribute.

D. categorical attribute

ANS:- C. input attribute.

61) What is the meaning of hard margin in SVM?

(A) SVM allows very low error in classification

(B) SVM allows high amount of error in classification

(C) Underfitting

(D) SVM is highly flexible

ANS:- (A) SVM allows very low error in classificati

62) Increase in which of the following hyper parameter results into overfit in Random forest? (1). Number of Trees. (2). Depth of Tree, (3). Learning Rate

(A) Only 1

(B) Only 2

(C) 2 and 3

(D) 1,2 and 3

ANS:- (B) Only 2

63) Below are the 8 actual values of target variable in the train file: [0,0,0, 0, 1, 1,1,1,1,1], What is the entropy of the target variable?

(A) -(6/10 log(6/10) + 4/10 log(4/10))

(B) 6/10 log(6/10) + 4/10 log(4/10)

(C) 4/10 log(6/10) + 6/10 log(4/10)

(D) 6/10 log(4/10) – 4/10 log(6/10)

ANS:- (A) -(6/10 log(6/10) + 4/10 log(4/10))

64) Lasso can be interpreted as least-squares linear regression where

(A) weights are regularized with the l1 norm

(B) weights are regularized with the l2 norm

(C) the solution algorithm is simpler

ANS:- (A) weights are regularized with the l1 norm

65) Consider the problem of binary classification. Assume I trained a model on a linearly separable training set, and now I have a new labeled data point that the model properly categorized and is far away from the decision border. In which instances is the learnt decision boundary likely to change if I now add this additional point to my previous training set and re-train? When the training model is,

(A) Perceptron and logistic regression

(B) Logistic regression and Gaussian discriminant analysis

(C) Support vector machine

(D) Perceptron

ANS:- (A) Perceptron and logistic regression

66) Assume you've discovered multi-collinear features. Which of the following actions do you intend to take next?

(1). Both collinear variables should be removed.

(2). Instead of deleting both variables, we can simply delete one.

(3). Removing correlated variables may result in information loss. We may utilize penalized regression models such as ridge or lasso regression to keep such variables.

(A) Only 1 (B) Only 2 (C) Either 1 or 3 (D) Either 2 or 3

ANS:- (D) Either 2 or 3

67) A least squares regression study of weight (y) and height (x) yielded the following least squares line: y = 120 + 5x. This means that if the height is increased by one inch, the weight should increase by what amount?

(A) increase by 1 pound

(B) increase by 5 pound

(C) increase by 125 pound

(D) None of the above

ANS:- (B) increase by 5 pound

68) The line described by the linear regression equation (OLS) attempts to ____?

(A) Pass through as many points as possible.

(B) Pass through as few points as possible

(C) Minimize the number of points it touches

(D) Minimize the squared distance from the points

ANS:- (D) Minimize the squared distance from the points

69) For two real-valued attributes, the correlation coefficient is 0.85. What does this value indicate?

(A) The attributes are not linearly related

(B) As the value of one attribute increases the value of the second attribute also increases

(C) As the value of one attribute decreases the value of the second attribute increases

(D) The attributes show a curvilinear relationship

ANS:- (B) As the value of one attribute increases the value of the second attribute also increases

70) Which neural network architecture would be most suited to handle an image identification problem (recognizing a dog in a photo)?

(A) Multi Layer Perceptron

(B) Convolutional Neural Network

(C) Recurrent Neural network

(D) Perceptron

ANS:- (B) Convolutional Neural Network