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

Answer of 51 is option c- as its feature nor number of groups is known and it discovers hidden patterns or data groupings without the need for human intervention

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

SVM

b) SVG

c) Random Forest Algorithm

d) None of the above

The answer of 52 is option B, SVG as it is a scalable vector graphic file format and not a machine learning algorithm.

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

Answer of 53 is option B, as underfitting is the scenario when the model fails to decipher the underlying trend in input data.

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

Answer of 54 is option 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

Answer of 55 is option B, Mean Squared error(MSE) which measures an average of the square of errors i.e. average squared difference between the estimated values and the actual value.

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, numeric

Answer of 56 is option c , non linear and binary.

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

Answer of 57 is option 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

Answer of 58 is option C, Euclidean distance and Manhattan distance are powerful distance metrics used by geometric model.

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

Answer of 59 is option A, Removing columns which have too many missing values

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

Answer of 60 is option c, input attribute is required by both supervised learning and unsupervised clustering.

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

Answer of 61 is option a, meaning of hard margin in SVM is SVM allows very low error in classification.

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

Answer of 62 is option 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) (D) 6/10 log(4/10) – 4/10 log(6/10)

Answer of 63 – couldn't solve the question

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

Answer of 64 is option A, lasso can be interpreted as least squares linear regressions where weights are regularised with the 11 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

Answer of 65 is option B, the training model is logistic regression and gaussian discriminant analysis.

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

Answer of 66 is option D, EITHER 1 OR 2 CHOICES

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

Answer of 67 -not attempted

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

Answer of 68 is option A, OLS attempts to pass through as many points as possible.

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

Answer of 69 is option C, as the value of one attribute decreases ,the value of the second attribute 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.

ANSWER of 70 is option B, Convolutional neural network which is the leading architecture for image recognition and detection tasks