Answers to MCQs

1. (d) dimensionality reduction reduces **Collinearity .**

2. (b) Random Forest is based upon the idea of bagging.

3. (c) Decision Trees are prone to overfitting**.**

4. (c) Training data is the term on which the machine learning algorithms build a model based on sample data.

5. (c) Anomaly detection helps in detecting the outliers in data.

6. (c) Case based is an incorrect numerical function in machine learning.

7. **(d)** Analysis of ML algorithms needs both **statistical learning theory** and **computational learning theory.**

8. (c) k-nearest neighbor algorithm is both **Curse of dimensionality** and **Calculate the distance of the test case** for all training cases.

9. (c) The total types of the layer in **radial basis function neural networks** are **3.**

10. (a) PCA is not a supervised learning.

11. (c) Unsupervised learning has neither feature nor number of groups known.

12. **(b) SVG** is not a machine learning algorithm.

13. **(c) Both a and b are correct -** overfitting and underfitting.

14. (a) Real-Time decisions, Game AI, Learning Tasks, Skill acquisition, and Robot Navigation are applications of **Reinforcement learning.**

15. (b) Mean squared error is the average squared difference between classifier predicted output and actual output**.**

16. (a) Logistic regression is **Linear and Binary.**

17. (A) Netflix series is an example of **supervised learning**.

18. (C) Both (a) and (b) are powerful distance metrics.

19. (A) Removing columns which have too many missing values.

20. (C) Input attribute is required in both supervised and unsupervised learning.

21. (A) SVM allows very low error in classification.

22. (B) The depth of the tree allows the overfitting of data in Random forest.

23. (A) -(6/10 log(6/10) + 4/10 log(4/10)) is the entropy of target variable.

24. (A) weights are regularized with the l1 norm.

25. (B) Logistic regression and Gaussian discriminant analysis

26. (D) either 2 or 3

27. (B) weight is increased by 5 pound

28. (D) Linear regression equation **minimizes the squared distance from the points.**

29. (B) as the value of one attribute increases the value of the second attribute also increases.

30. (B) Convolutional Neural Network is suited to handle an image identification problem.