

BCM SCHOOL
BASANT AVENUE, DUGRI ROAD, LUDHIANA
CLASS X
ARTIFICIAL INTELLIGENCE (417)
ASSIGNMENT

Q1) Multiple Choice Questions

(5 mark Questions)

- 1) Which of the following is correct about the rule-based approach?
 - a. We cannot provide enough rules to the machine.
 - b. A drawback/feature for this approach is that the learning is static.
 - c. Once the rules are fed into the system, it takes into consideration any changes made in the original training dataset.
 - d. It can improve itself based on the feedbacks.

- 2) A business problem wherein we categorize whether an observation is "Safe," "At Risk," or "Unsafe" is an example of
 - a. Classification
 - b. Clustering
 - c. Regression
 - d. Dimensionality Reduction

- 3) Assertion (A): We can use histograms when data is in categories (such as "Pop", "Rock", "Jazz", "Hip-Hop" etc.)
Reason (R): We use bar charts when we have continuous data (such as a person's height or weight)
 - a. (A) is false but (R) is true
 - b. (A) is true but (R) is false
 - c. Both (A) and (R) are true
 - d. Both (A) and (R) are false

- 4) Choose the correct option
 - a. Unsupervised learning -> labelled dataset, Regression
 - b. Supervised learning -> labelled data set, Regression
 - c. Unsupervised learning -> unlabelled dataset, Classification
 - d. Supervised learning -> unlabelled data set, Regression

- 5) Data about the houses such as square footage, number of rooms, features, whether a house has a garden or not, and the prices of these houses, i.e., the corresponding labels are fed into an AI machine. By leveraging data coming from thousands of houses, their features and prices, we can now train the model to predict a new house's price. This is an example of
 - a) Reinforcement learning
 - b) Supervised learning
 - c) Unsupervised learning
 - d) None of the above

- 6) _____ is defined as the percentage of correct predictions out of all the observations.
 - a) Predictions
 - b) Accuracy
 - c) Reality
 - d) F1 Score

- 7) In _____, the machine is trained with huge amounts of data which helps it in training itself around the data.
 - a) Supervised Learning
 - b) Deep Learning
 - c) Classification
 - d) Unsupervised

Q2) Short Question Answers

(10 Mark Questions)

- 1) What are the two different approaches for AI modelling? Define them
- 2) Draw the graphical representation of Classification AI model. Explain in brief.
- 3) Draw the graphical representation of Regression AI model. Explain in brief
- 4) Draw the graphical representation of Clustering AI model. Explain in brief.
- 5) Explain Data Exploration stage