1. What is the concept of human learning? Please give two examples.

Human learning is the process where you can understand and estimate the accuracy in learning.

2. What different forms of human learning are there? Are there any machine learning equivalents?

Reinforcement learning is one form for human learning whereas supervised learning, unsupervised learning for machine learning.

3. What is machine learning, and how does it work? What are the key responsibilities of machine learning?

It is an art where the machine will learn from the data which is helpful for prediction, It works by applying the algorithm, to the training data and prediction the output, key responsible for ML is developing the model with good accuracy score.

4. Define the terms "penalty" and "reward" in the context of reinforcement learning.

Penalty it the term we when wrong steps taken by the agent whereas reward is the term when correct step taken by agent.

5. Explain the term "learning as a search"?

Applying best input to the model and getting good accuracy

6. What are the various goals of machine learning? What is the relationship between these and human learning?

It allows software applications to become more accurate at predicting outcomes without being explicitly programmed. Humans acquire knowledge through experience either directly or shared by others. Machines acquire knowledge through experience shared in the form of past data.

7. Illustrate the various elements of machine learning using a real-life illustration.

data, data selection, data preprocessing, model building, training model, testing model prediction, accuracy

8. Provide an example of the abstraction method.

Process of hiding the unnessary information for the custumer

9. What is the concept of generalization? What function does it play in the machine learning process?

Generalization determine how well the model is trained for prediction unknown data.

.predict function will help in do this.

What is classification, exactly? What are the main distinctions between classification and regression?

Classification where my target variable is categorical data. Difference between classification and regression is that classification used to those data whose target variable is categorical, whereas regression is used when my data is continous.

11. What is regression, and how does it work? Give an example of a real-world problem that was solved using regression.

Regression hold few type of algorithm which is used when my target variable is continous

Real world problem : imagine that you need to check your salary will increase based on your experience. Here you will collect the data first and my target data is salary then i will be using regression technique and apply any one of the algorithm to get the result and accuracy score.

12. Describe the clustering mechanism in detail.

Divide the data based on their similar character

13. Make brief observations on two of the following topics:

i. Machine learning algorithms are used Linear regression, Logistic regression ,knn, dt, xgboost

ii. Studying under supervision: regression algo + classification algo

iii. Studying without supervision: clustering and association.

iv. Reinforcement learning is a form of learning based on positive reinforcement. Human learning.