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

Many examples of this case are found in case of human learning. **Learning to drive a motor-car, typewriting, singing or memorizing a poem or a mathematical table, and music** etc. need exercise and repetition of various movements and actions many times.

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

* Supervised learning
* Unsupervised learning
* Reinforcement learning

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

- It is an algorithm based functionality which understands the dataset to predict well.

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

- A reinforcement learning algorithm, which may also be referred to as an agent, learns by interacting with its environment. **The agent receives rewards by performing correctly and penalties for performing incorrectly**. The agent learns without intervention from a human by maximizing its reward and minimizing its penalty.

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

- Learning through searching, finding the description that best demonstrate the scenario.

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

- To predict well in general sense, and also to make prediction more accurate and use it for good business purpose.

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

1. image recognition

2. speech detection

3. data prediction

8. Provide an example of the abstraction method.

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

Generalization refers to **your model's ability to adapt properly to new, previously unseen data, drawn from the same distribution as the one used to create the model**. Develop intuition about overfitting. Determine whether a model is good or not. Divide a data set into a training set and a test set.

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

11. What is regression, and how does it work? Give an example of a real-world problem that was solved using regression.  
  
Medical researchers often use linear regression to understand the relationship between drug dosage and blood pressure of patients.

12. Describe the clustering mechanism in detail.

- IT forms clusters of similar datasets

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

i. Machine learning algorithms are used

- For medical research etc.

ii. Studying under supervision

Maybe it helps to learn well.

iii. Studying without supervision

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

* In general, a reinforcement learning agent is able to perceive and interpret its environment, take actions and learn through trial and error.