Artificial Intelligence & Machine Learning Questions and Answers

Q1. What is Artificial Intelligence (AI)?

Artificial Intelligence is a branch of computer science that focuses on creating machines or systems that can perform tasks requiring human intelligence such as learning, reasoning, and decision-making.

Q2. What are the main goals of AI?

The main goals of AI include learning from data, reasoning, problem-solving, decision-making, and understanding language and images.

Q3. Explain the types of AI.

AI is divided into Narrow AI (task-specific), General AI (human-like intelligence), and Super AI (beyond human intelligence).

Q4. What is Machine Learning (ML)?

Machine Learning is a subset of AI that allows systems to learn from data and improve automatically without explicit programming.

Q5. What is the relationship between AI and ML?

AI is the broader concept of intelligence, while ML is a method used to achieve AI through data-driven learning.

Q6. What are the types of Machine Learning?

The three main types are Supervised Learning, Unsupervised Learning, and Reinforcement Learning.

Q7. What is Supervised Learning?

It is a type of ML where models are trained on labeled data with known outputs.

Q8. What is Unsupervised Learning?

It is a type of ML where models work on unlabeled data to find patterns or groups.

Q9. What is Reinforcement Learning?

It is a learning method where an agent learns through rewards and penalties by interacting with an environment.

Q10. What is Deep Learning?

Deep Learning is a subset of ML that uses multi-layer neural networks to learn complex patterns.

Q11. What is a Neural Network?

A Neural Network is a model inspired by the human brain, consisting of interconnected neurons.

Q12. Differentiate between AI, ML, and DL.

AI is the broad field, ML is learning from data, and DL is learning using deep neural networks.

Q13. List applications of AI and ML.

Applications include healthcare, finance, education, transportation, and e-commerce.

Q14. What are the advantages of AI and ML?

They reduce human effort, handle large data, work continuously, and improve accuracy.

Q15. What are the limitations of AI and ML?

They require large data, have high costs, lack emotions, and may show bias.