Question 1: What is overfitting in machine learning?

Answer 1: Overfitting happens when a model learns too much from training data, including noise, and performs poorly on unseen data. It captures patterns that dont generalize, leading to high accuracy in training but low accuracy in testing. Regularization, pruning, and cross-validation help prevent overfitting.

Question 2: What is the difference between REST and GraphQL?

Answer 2: REST uses multiple endpoints with fixed data structures, while GraphQL allows clients to request specific data from a single endpoint, reducing over-fetching and under-fetching. GraphQL provides more flexibility but requires additional setup and security considerations.

Question 3: What is the difference between SQL and NoSQL databases?

Answer 3: SQL databases use structured tables and schemas (e.g., MySQL), while NoSQL databases (e.g., MongoDB) store data flexibly in key-value, document, column, or graph formats. NoSQL is better for scalability and unstructured data.

Question 4: What is phishing?

Answer 4: Phishing is a cyberattack where attackers trick users into providing sensitive information, such as passwords or credit card details, via fake emails, messages, or websites. Awareness and multi-factor authentication help prevent phishing.

Question 5: What is virtual memory?

Answer 5: Virtual memory is a memory management technique where a portion of the hard drive acts as RAM when physical RAM is full. It allows running large applications but can slow performance due to disk usage.