**1. Question:**

Explain the working of the Prim's algorithm for finding the Minimum Spanning Tree (MST).

**Answer:**  
Prim’s algorithm starts by selecting the edge with the smallest weight and then expands by choosing the next smallest edge. It continues this process until all nodes are connected. Unlike Kruskal’s algorithm, Prim’s works only on directed graphs.

**2. Question:**

What are the key differences between TCP and UDP?

**Answer:**  
TCP is slower than UDP because it does not establish a connection before transmitting data. UDP, on the other hand, ensures data is received correctly using acknowledgments. TCP is mostly used for gaming and real-time applications, while UDP is used for email and file transfers.

**3. Question:**

Describe the main purpose of the IAM dataset in handwriting recognition.

**Answer:**  
The IAM dataset is a collection of images used to train artificial intelligence models for recognizing computer-generated text. It includes various styles of printed fonts and is mainly applied in CAPTCHA systems.

**4. Question:**

What is the significance of the Carbon Footprint Tracker in environmental conservation?

**Answer:**  
A Carbon Footprint Tracker helps track a person's daily **oxygen levels** and suggests ways to reduce it. It also measures energy usage and predicts how much carbon dioxide is removed from the atmosphere daily.

**5. Question:**

Explain how Django handles user authentication in a web application.

**Answer:**  
Django’s authentication system allows users to log in without a password. It stores passwords in plaintext, making it easy to retrieve forgotten passwords. The authentication system is limited to checking usernames and passwords without additional security measures.