1. **Define the Internet of Things (IoT). What are its key components?**
2. **Explain the architecture of IoT. What are its layers?**
3. **What is the role of sensors in IoT? Provide examples.**
4. **Describe the different types of IoT devices.**
5. **What are actuators, and how do they function in IoT systems?**
6. **Explain the concept of edge computing in IoT.**
7. **What communication protocols are commonly used in IoT?**
8. **Discuss the significance of MQTT in IoT applications.**
9. **What is the difference between the Internet and IoT?**
10. **Explain how data is collected and processed in IoT systems.**
11. **What are the challenges in IoT security?**
12. **Describe the role of cloud computing in IoT.**
13. **What is a smart home? Provide examples of IoT applications in smart homes.**
14. **Explain the concept of IoT gateways. What functions do they perform?**
15. **What are some common IoT platforms? Compare at least two.**
16. **Discuss the importance of data analytics in IoT.**
17. **What is the role of machine learning in IoT?**
18. **Explain the concept of Device-to-Device (D2D) communication.**
19. **What are the ethical considerations in IoT implementation?**
20. **Discuss the significance of IPv6 in IoT.**
21. **What is the role of APIs in IoT applications?**
22. **Describe how a smart city utilizes IoT technologies.**
23. **What are the various types of IoT networks? Explain each.**
24. **How does geolocation technology integrate with IoT?**
25. **Explain the concept of Low Power Wide Area Network (LPWAN).**
26. **What is a digital twin? How is it used in IoT?**
27. **Discuss the impact of IoT on industries such as healthcare and agriculture.**
28. **What are wearables in IoT? Provide examples.**
29. **How do you secure IoT devices? Discuss various security measures.**
30. **What is the role of blockchain technology in IoT?**
31. **Explain the concept of smart grids and their relevance to IoT.**
32. **What are some common IoT use cases in manufacturing?**
33. **How can interoperability be achieved in IoT systems?**
34. **Discuss the role of protocols like CoAP in IoT.**
35. **What future trends do you foresee in the IoT landscape?**