Internet of Things (IoT)

Long Questions.

1. What is Internet of Things (IoT). What are components required to design IoT Device and which device we called IoT device explain with example.
2. Explain Internet of Things (IoT) with example.
3. Give brief overview of IoT.
4. Explain the physical Design of IoT.
5. Explain four Pillars of IoT and how they are inter-connected with each other?
6. What are different challenges of IoT?
7. What is Machine to Machine communication (M2M)?
8. **Explain different Characteristics of IoT.**
9. **Explain 5 different types of Sensors.**
10. What effect will the internet of things (IoT) have on our daily lives? Explain with any one example of smart device.
11. Explain Challenges and requirements of IoT device.
12. Explain vision of IoT?
13. Explain layered architecture of IoT.
14. Explain building block of IoT.
15. Explain different networking and communication model in IoT.
16. What are different wired and wireless connectivity we can used in IoT explain with example.
17. Explain wireless sensor network in detail.
18. What is relation between WSN and IoT. Explain with example.
19. What effect will the internet of things (IoT) have in healthcare? Explain with any one example of smart device.
20. Explain in details IoT Architecture layers.
21. What is requirement of IoT Protocol Standardization?
22. Explain with example MQTT Protocol. What is role of MQTT protocol in IoT?
23. Write a note on : CoAP, AMQP, XMPP.
24. What are different IoT protocols?
25. **What is role of Cloud Computing and Big Data in Internet of Things?**
26. **Write a detailed note on IoT Communicational Model.**
27. What is IoT Analytics?

28. Difference between Web of Things versus Internet of Things.
29. Why we need of IoT Security.
30. Write a note on: 1) Trust for IoT 2) Security and Privacy for IoT 3) Physical IoT Security.
31. Explain on Devices Security and Privacy of IoT cloud.
32. Write note on: Wearable - Smart Cities- Smart Home – Smart HealthCare- Agriculture - Smart Grid.
33. Explain with example: Wearable - Smart Cities- Smart Home – Smart HealthCare- Agriculture - Smart Grid.
34. **Differentiate between Sensors and Actuators.**
35. **Define Embedded System and explain its various characteristics and structure.**
36. Differentiate between Raspberry pi and Arduiano.
37. Explain Components of Raspberry pi, and define its Purpose.
38. Write a note on Applications of Raspberry pi.
39. Explain the Hardware and Various features of Arduino.
40. Write a note on Applications of Arduino.

Short Questions.

1. **Mention key features of M2M.**
2. **Explain the Proximity Sensor.**
3. **Give 2 differences between TCP and UDP.**
4. **Define CIA triad.**
5. **Explain Predictive and Prescriptive Analytics.**
6. **Explain IaaS, PaaS and SaaS.**
7. **Explain IPv4 and IPv6.**
8. **Mention 4 applications of WSN.**
9. Explain any 2 IOT Communicational Model.
10. Give 2 difference between Sensors and Actuators.
11. Define AAA Framework.
12. What do you mean by Diagnostic analytics.
13. Explain Infrared(IR) Sensor.

14. Differentiate between IOT and M2M.

15. What is Protocol Suite ?

16. Mention Big Data analytics tools.

17. Explain Challenges of WSN.

18. Mention IoT enabling techniques.

19. Differentiate between Analog and Digital Sensors.

20. Explain Perception Layer of IOT building blocks.

21. What is IOT gateway?

22. Discuss Smart health using IOT.

23. Discuss Smart home using IOT.

24. Discuss Smart Parking using IOT.

25. Explain Smart City application of IOT.

26. Define Link Layer Protocols in IOT.

27. State the Importance of IOT.

28. List any four Characteristics of IOT.

29. What do you mean by RFID.

30. Define WebSocket and DDS in IoT Application Layer Protocols.

31. Differentiate between COAP and HTTP.

32. Define Data Accumulation in IoT Architecture.

33. What is Edge Computing?

34. Mention Raspberry pi models name.

35. Define GPIO Component of Raspberry pi.