SUGGESTIONS

Introduction to IoT (CS605A)

1. Define Internet of Things (IoT) and discuss about IoT vision in details.
2. What are the major applications of IoT?
3. What do you mean by IoT strategy research and innovation?
4. Explain the five IoT research directions.
5. List any 2 key features of a Raspberry Pi board and write their functions.
6. What is Brownfield IoT, and what are the key challenges in integrating IoT solutions into existing infrastructure?
7. Describe the main design principles, required capabilities, outline of a typical IoT architecture.
8. What is Arduino, and how does it differ from Raspberry Pi in terms of functionality and applications?
9. Define wireless sensor network (WSN) and describe its various components.
10. What are the major types of wireless sensor network? Illustrate.
11. What are the different classes of routing protocols?
12. What is the common issue related to the wireless medium access in IoT communication?
13. Explain the concept of sensor deployment in Wireless Sensor Networks (WSNs), Data aggregation & dissemination.
14. Discuss the design principles and capabilities required for transition of M2M to IoT.
15. How does the internationally driven global value chain lead to global information monopolies?
16. Explain the transition from M2M communication to the IoT by discussing architectural overview.
17. Describe how the IoT value chain contributes to the emerging industrial structure of IoT.
18. Write the difference between M2M and IoT. the roles.
19. Discuss the significance of 'Other Relevant Architectural Views' in IoT design.
20. How does Big Data contribute to value creation in businesses? Compare and contrast JSON and XML as data serialization formats in terms of structure, readability and efficiency.
21. How can Raspberry Pi be used as an IoT-based smart home automation system? Explain with an example.

22. Discuss the major privacy and security issues in IoT systems. Provide real-world examples to illustrate these concerns.
23. Write a short note on MAC Protocol or Fog Computing.
24. Explain the Smartie Approach in IoT security.
25. What are the different types of WSN?
26. What are the challenges in wireless access medium?
27. What is Node discovery in IoT?
28. How does the internationally driven global value chain lead to global information monopolies?
29. Explain the Smartie Approach in IoT security.
30. Discuss its key components and how it helps in ensuring privacy and secure data sharing in smart applications with relevant examples.
31. How does Arduino differ from Raspberry Pi in terms of functionality and applications?
32. What is data serialization, and why is it important in Big Data processing?
33. Discuss the role of sensors and actuators in IoT.
34. Write down the advantages and disadvantages of IoT.
35. Explain the importance of data aggregation and dissemination in wireless sensor networks.
36. Illustrate different types of challenges associated with IoT.
37. Write a short note on wireless media access protocols.
38. Illustrate the deployment and operational views of IoT reference architecture.
39. Discuss about the scope of IoT in healthcare applications.
40. What is Brownfield IoT? Distinguish Brownfield IoT and Greenfield IoT.
41. Discuss about the key components of a smart city.
42. Define IoT universe. What do you mean by IoT strategy research?
43. Explain the future Internet Technologies in IoT.
44. Explain the privacy and security issues associated with IoT.
45. Describe the main design principles, required capabilities, outline of a typical IoT architecture.
46. Write a short note on MAC protocol.
47. How does data serialization contribute to value creation from Big Data in terms of storage, transmission, and processing efficiency?