2023

UNIT 1

Q1) a) Compare and contrast in between IOT and IIOT. [5]
b) Discuss various opportunities and challenges in implementation of IIOT. [5]
c) State and explain the role of IIOT in manufacturing processes with suitable and neat sketch. [5]

OR

Q2) a) Elaborate various requirements and design considerations of IIOT.[5]
b) Comment on industrial revolutions and significance of IIOT with suitable example. [5]
c) List any 5 advantages and applications of IIOT. [5]

UNIT 2

Q3) a) Explain IIOT Sensor Network with neat and suitable diagram. [5]
b) State and explain in brief the role of sensors and actuators used in industrial processes. [5]
c) Compare nWave and Ingenue RPMA on the basis of the following parameters : [5]
i) Frequency Band ii) Range
iii) Topology iv) Uplink Data Rate
v) Downlink Data Rate
OR
Q4) a) Differentiate between Sensors and Actuators. [Any 5 valid points] [5]
b) Explain data acquisition and process automation in IIOT with suitable sketch. [5]
c) List any 5 features of Wi-Fi Backscatter. [5]

2024

UNIT 1

Q1) a) Describe how the IIoT evolved from the Internet of Things (IoT). [5]

b) Define the Industrial Internet of Things (IIoT). Compare and contrast the similarities and differences between IoT and IIoT [5]
c) Explain how the IIoT is helping to improve efficiency, productivity and safety in industry. [5]

OR

Q2) a) Explain how the IIoT is helping to prevent unplanned downtime and improve asset reliability. [5]

b) Identify specific applications of IIoT in industry. [5]

c) List the benefits of using IIoT in industry. [5]

UNIT 2

Q3) a) Identify the different types of sensors used in industrial processes. [5]
b) Compare and contrast the different types of IIoT sensor networks. [5]
c) Recommend an IIoT low power WAN technology for a specific industrial application. [5]

OR

Q4) a) Identify the different types of actuators used in industrial processes. [5]
b) Explain the advantages and disadvantages of each type of IIoT sensor network. [5]
c) Analyze how process automation and data acquisition are used together to improve the efficiency and productivity of industrial processes. [5]