IOTA-QUESTION BANK
UNIT-1- Fundamentals of IoT -Important questions

1. Describe the IoT enabling Technologies & M2M Communication with suitable explanations.
2. Explain in detail IOTWF standardized reference model Architecture.
3. Summarize in detail IoT data management and Compute stack.
4. Describe the simplified IoT Architecture.
5. Discuss about the following in detail
    a) Sensors and Actuators.   b) Connecting Smart Objects.
6. Explain the various functional blocks of IoT eco systems.

UNIT 2- IOT PROTOCOLS

1. Describe Physical and MAC layersTopology and Security of IEEE 802.15.4 IEEE 802.15.4 & tabulate the protocol stacks utilizing IEEE 802.15.4.
2. Analyze in detail Lora WAN technology, illustrating the layers, MAC format and Architecture.
3. Discuss the following: a) IEEE 802.11ah   b) IP versions
4. Briefly discuss about Constrained nodes and Networks
5. Explain the following: a)6LoWPAN b) SCADA
6) Describe about Application Layer Protocols: (a) CoAP   (b) MQTT

UNIT III: DESIGN AND DEVELOPMENT

1. Demonstrate the key steps involved in IoT Design methodology in detail
2. Explain about embedded computing in IoT
3. Discuss about the following
   i)SoC   ii) Microcontrollers
4. Discuss in detail the use of embedded computing in the design of IoT Systems.
   (i) Analyze in detail an exemplary device: Raspberry Pi.
   (ii) Explain in detail the Raspberry Pi interfaces.
5. Illustrate the Arduino board details and explain the steps for installing the board.
6. Discuss in detail the building blocks of IoT and its functionalities with suitable illustration.

UNIT-IV DATA ANALYTICS AND SUPPORTING SERVICES

1. What is the difference between structured data and unstructured one, mentioning examples of each one?
2. What is the difference between data in motion and data in rest, mentioning examples to each one?
3. Explain in detail the need and types of Data Analytics for IoT and brief the challenges faced by IoT Data Analytics.
4. Explain about Data Acquiring and Organizing in IoT/M2M,
5. Explain the following
    i) Cloud Platform for IoT/M2M Applications/Services   ii) Cloud Service Models

UNIT V-CASE STUDIES/INDUSTRIAL APPLICATIONS

1. Explain the smart home automation system in an IOT?
2. Discuss the Infrastructures and Buildings development of an IOT?
3. Describe the application of Securities and industrial automation in an IoT.
4. Explain the types of home appliances and other IoT electronic equipment's.
5. Explain the concept of Industry 4.0