

Note:

1. Question number 1 is compulsory
2. Attempt any 3 questions from remaining five questions
3. All questions carry equal marks
4. Assume suitable data , if required and state it clearly

Q. 1 Attempt any Four

(20)

- a. Compare IoT and M2M with suitable example
- b. List various actuators in IoT based systems. Explain any two actuators.
- c. What are different types of data formats? Explain any one in detail.
- d. What are the features of MQTT?
- e. Compare CoAP and HTTP
- f. Explain security vulnerabilities in IoT.

Q. 2 a. List IoT enabling technologies. Explain with suitable example role of big data analytics in IoT system design (10)

b. List and explain WSN topologies (10)

Q. 3 a. Explain cloud service models and cloud deployment modules (10)

b. Compare LoRaWAN with NB-IoT (10)

Q. 4 a. List web communication protocols. Explain LWM2M in detail. (10)

b. Draw and explain data analytics life cycle (10)

Q. 5 a. Draw and explain IoT deployment level 2 with an example. (10)

b. List and Explain IoT communication models (10)

Q. 6 a. Explain the IoT Security requirements (10)

b. What do you understand by the term 'Operational View Specification'? (10)

Detail any two Operational Groups with relevant example.

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