

III B. TECH I SEMESTER REGULAR EXAMINATIONS, FEB - 2022
FUNDAMENTALS AND PRINCIPLES OF INTERNET OF THINGS
(MECHANICAL ENGINEERING)

Time: 3 Hours**Max. Marks: 60**

Note: Answer ONE question from each unit (5 × 12 = 60 Marks)

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UNIT-I

1. a) Define IoT? Explain Characteristics of IoT. [6M]  
b) Explain working of IoT. [6M]

(OR)

2. a) Explain Physical design of IoT. [6M]  
b) Explain the following protocols (a) HTTP (b) AMQP [6M]

UNIT-II

3. a) Explain key application areas of M2M. [6M]  
b) What are the six pillars of M2M? Explain them in detail. [6M]

(OR)

4. a) Draw and explain the layers of software defined networking (SDN). [6M]  
b) What is Network Function Virtualization? Explain its benefits. [6M]

UNIT-III

5. a) Write a short note on cloud computing. [6M]  
b) With a neat sketch explain seven-layer architecture of IoT. [6M]

(OR)

6. a) Discuss in detail about design challenges of IoT. [6M]  
b) Discuss in detail about development challenges of IoT. [6M]

UNIT-IV

7. a) Write a short note on Information model specification. [6M]  
b) Discuss about Service and functional view specifications in the IoT design methodology. [6M]

(OR)

8. a) Discuss in detail about Device & Component integration. [6M]  
b) Discuss in detail about Application development in IoT. [6M]

UNIT-V

9. a) Explain the design procedure of an IoT based weather [6M]  
monitoring system.
- b) How IoT helps in developing smart cities? What are the research [6M]  
challenges involved in this process?

(OR)

10. a) Write a short note on IoT-based smart energy design with [6M]  
examples.
- b) What effect will the Internet of things (IoT) have in healthcare? [6M]  
Explain with any one example.

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