Printed Pages: 01 **Sub Code: MTEC031**

Paper Id: 231201 **Roll No.** | | | | | | | | | | |

M TECH
(SEM–II) THEORY EXAMINATION 2018-19
INTERNET OF THINGS

Time: 3 Hours **Total Marks: 70**

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief. **2 x 7 = 14**

a. What are the advantage of carrier sense multiple access protocol?
b. State the relationship between data rate and bandwidth.
c. Compare TCP/IP and OSI model data communication Networks.
d. What are the advantages of sensor network?
e. What is Internet of thing?
f. What is relationship between computation and communication?
g. What did you understand by hybrid MAC protocol?

SECTION B

2. Attempt any three of the following: **7 x 3 = 21**

a. Explain the different network topologies in detail.
b. Explain the application of sensor network in detail.
c. Explain Low duty cycle protocols and wakeup concepts.
d. What is Importance of impact and open innovation in data-driven decision Making?
e. Differentiate between Business Intelligence and Artificial Intelligence.

SECTION C

3. Attempt any one part of the following: **7 x 1 = 7**

(a) What are Architectural design considerations for IOT?
(b) Explain Predictive and Prescriptive Analytics for IOT.

4. Attempt any one part of the following: **7 x 1 = 7**

a). Draw and explain Single-node architecture of wireless sensor network (WSN).
b) Draw the network architecture IEEE 802.15.4 MAC protocol.

5. Attempt any one part of the following: **7 x 1 = 7**

(a) What are the Design principles for WSNs. (wireless sensor networks).
(b) What is Importance of impact and open innovation in data-driven decision making?

6. Attempt any one part of the following: **7 x 1 = 7**

(a) Why gateways needed? Explain WSN to Internet communication.
(b) Draw and explain frame structure Contention-based protocols.

7. Attempt any one part of the following: **7 x 1 = 7**

(a) Explain WSN tunneling in detail.
(b) What are different Characteristics of MAC Protocols in Sensor Networks?

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