Printed Pages: 01 **Sub Code: MTCS-202**
Paper Id: 210220 **Roll No.** | | | | | | | | | | |

M. TECH.
(SEM-II) THEORY EXAMINATION 2018-19
WIRELESS AND MOBILE NETWORKS

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 x7 = 14**

a**.** Discuss any three applications of MANET.
b. Discuss about Bluetooth in brief.
c. Discuss about RFID.
d. What is MEO Satellite System?
e. Discuss working of DHCP.
f. Discuss about hidden and exposed terminals.
g. Discuss about Handover in GSM.

SECTION B

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

a. What is multiplexing? Explain with suitable example.
b. What is Wireless Sensor Network? Compare Traditional Network and Wireless Sensor Network.
c. Explain GSM system architecture.
d. Explain the security issues in Wireless Network.
e. Explain the working of AODV protocol.

SECTION C

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

(a)**.** Explain various Propagation Modes.
(b). Explain various representation of signals.

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

(a).List and explain challenges in MANETs
(b). Explain the satellite systems. Also prove that the round-trip transmission delay(t) is in the range:

$$\frac{2h}{C} \leq t \leq \frac{2(R+h)sin\beta}{C\ cos\theta}$$

Where:

C =Speed of light
R =Radius of Earth
β =Coverage angle
θ= Minimum elevation angle
h =Orbit height

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

(a). How IP packet is sended in Mobile Network. Explain by taking an example.
(b). Explain the working of DSR routing protocol in MANET.

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

(a). Explain various Antennas types and also discuss antenna gain.
(b). Explain various applications of Wireless Sensor Network.

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

(a). (i). Discuss the effect of mobility in TCP. (ii). Discuss about WWW.
(b). List and explain various challenges of MANET.

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