Printed Pages: 01 **Sub Code: MTEC051**

Paper Id: 231207 **Roll No.** | | | | | | | | | | |

M. TECH.
(SEM II) THEORY EXAMINATION 2018-19
ADVANCED WIRELESS 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 x 7 = 14**

a. Explain OFDM transmission.
b. Define WiMAX.
c. What is GSM?
d. Define GPRS.
e. What are the basic units of a Cellular system?
f. What are the spread spectrum techniques?
g. What is the need for WIMAX?

SECTION B

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

a) What are various GSM services and its features?
b) Explain Fixed WiMAX system profiles and Mobile WiMAX profiles.
c) Explain UMTS services and features.
d) Explain SOFDMA.
e) Explain the architecture of GSM.

SECTION C

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

(a) Compare TDMA, FDMA,SDMA in terms of transmission techniques,advantages, Disadvantages & applications.
(b) What is Mobility handover?

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

(a) Explain cellular topology.Discuss the technical issues while planning for a cellular network.
(b) Explain the Layers of WiMAX and CS.

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

(a) Explain 3G UMTS network architecture with diagram.
(b) Explain IEEE 802.16 in detail.

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

(a) Explain Uplink bandwidth allocation and request mechanisms in WI-Max.
(b) Explain Cellular concept with the help of neat diagram.

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

(a) Explain Channel coding, Turbo coding, Burst profile.
(b) Explain the various powers save modes.

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