

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.