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MTECH
(SEM II) THEORY EXAMINATION 2021-22
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. 2x7 = 14

a.	Why hexagonal shape is selected for cellular networks?
b.	Discuss frequency reuse.
c.	Enlist advantages of OFDM systems.
d.	Discuss difference between multiplexing and multiple access,
e.	Describe handover.
f.	Discuss GSM frame structure.
g.	Discuss GPRS features.

SECTION B

2. Attempt any *three* of the following: 7x3 = 21

a.	Explain GSM radio subsystem
b.	Explain 802.16 standard.
c.	Explain licensed and unlicensed frequencies.
d.	Describe SOFDMA.
e.	Discuss Burst profile.

SECTION C

3. Attempt any *one* part of the following: 7x1 = 7

a.	Describe signal processing in GSM.
b.	Discuss GPRS network architecture.

4. Attempt any *one* part of the following: 7x1 = 7

a.	Explain physical layer and security layer of WiMAX.
b.	Describe WiMAX topology.

5. Attempt any *one* part of the following: 7x1 = 7

a.	Explain fixed WiMAX system profiles.
b.	Illustrate Turbo coding.

6. Attempt any *one* part of the following: 7x1 = 7

a.	Describe uplink bandwidth allocation and request mechanisms.
b.	Explain Network entry and QoS management in WiMAX.

7. Attempt any *one* part of the following: 7x1 = 7

a.	Discuss WiMAX architecture.
b.	Describe advance antenna technology with respect to WiMAX.