

Reg. No.									
----------	--	--	--	--	--	--	--	--	--



MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL

A Constituent Institution of Manipal University

VII SEMESTER B.TECH. DEGREE
END SEMESTER EXAMINATIONS, NOVEMBER 2017
SUBJECT: WIRELESS NETWORKS (Program Elective) [CSE 4016]
REVISED CREDIT SYSTEM
(28/11/2017)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- | |
|--|
| <ul style="list-style-type: none">❖ Answer ALL the questions.❖ Missing data may be suitably assumed. |
|--|

- 1A. Explain the working of CDMA by taking some example sample station codes. 3M
- 1B. With a neat diagram explain 3 types of propagation mechanisms with respect to electromagnetic waves. 3M
- 1C. In GSM, 890 MHz to 915 MHz are used from Mobile Station to Base Station. GSM uses TDMA/FDD with each channel bandwidth is 200 kHz. If 8 speech channels are supported on a single radio channel, no guard bands are used, find the number of users that they can make call simultaneously?
- (ii) What types of access technologies are used for the following systems?
(a) AMPS (b) GSM (c) IMT 2000
- (iii) State some of the features of TDMA 4M
- 2A. Discuss various types of handover with respect to GSM. How does the Authentication and Security is handled in GSM? 4M
- 2B. Differentiate between GSM and CDMA cellular standards in terms of hardware, spectrum access, usage. 3M
- 2C. Explain various types of channels used in GSM. 3M
- 3A. What are the advantages of WLL over wired network? Mention any three differences between LMDS and MMDS. 4M
- 3B. Explain the need for OFDM in 4G technology. 3M
- 3C. Differentiate between IEEE 802.11 and IEEE 802.16 standards. 3M
- 4A. List any four applications of WLAN. Compare Infrared and microwave physical layer of WLAN. 3M
- 4B. What is the need for Asynchronous Transfer Mode(ATM)? With a neat block diagram explain the working of ATM architecture. How does Mobile ATM take care of Location management and Handover? 4M
- 4C. Distinguish between Table driven and On-demand routing protocols. List any two example protocols under each category? 3M

- 5A. Explain the Distance-based wireless geolocation system. Mention its disadvantages. Also list the applications. 3M
- 5B. With a neat diagram explain the working of CGWR protocol. 3M
- 5C. List and explain PAN applications. Write the significance of each fields in Bluetooth packet format. 4M