Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

VII SEMESTER B.TECH. (COMPUTER SCIENCE AND ENGINEERING)
END SEMESTER EXAMINATIONS, DEC 2018
SUBJECT: WIRELESS NETWORKS [CSE 4016]
REVISED CREDIT SYSTEM
(01/12/2018)

Time: 3 Hours MAX. MARKS:50

Instructions to Candidates:

- Answer **ALL** questions.
- Missing data may be suitable assumed.

1A. Discuss any six wireless LAN management frames. 3M

1B. (i) In the communication channel, the channel bandwidth is 5.4KHz and output S/N ratio is 30dB. Calculate channel capacity. 4M

(ii) For a hexagonal cluster with shift parameters as 4 and 3 and distance from center to vertex being 420 meters, compute the reuse distance.

1C. Compare and contrast different digital modulation techniques for wireless system. Also draw timing diagram for each technique. 3M

2A. Write the sequence of events that occur when AMPS mobile station is powered up. 2M

2B. With the help of a diagram, explain different components of GSM architecture. 5M

2C. Describe the characteristics of 3G. 3M

3A. Explain eNodeB and evolved packet core. 2M

3B. Write the 802.11 frame structure and explain each field. 5M

3C. Explain the Association Control Function and DLC User Connection Control function of HiperLAN2. 3M

4A. Differentiate between LMDS and MMDS fixed wireless system. 3M

4B. Explain the reference model of Wireless ATM. 4M

4C What are the different wireless data systems? Explain their features and characteristics. 3M

5A. Explain protocol stack of Bluetooth. 4M

5B. With a help of a diagram, explain different states of master and slave devices in Bluetooth. 3M

5C. What are different types of distance based geolocation technique? Explain them. 3M