IV B.Tech I/II Semester Examination, May 2016

**MOBILE COMPUTING**

Time: **3** hours (CSE) Max. Marks: **60**

## Instructions: 1. Answer ONE question from each unit

## 2. All Questions carry equal marks

**3. Assume missing data, if any**

**UNIT – I**

1. a) What is Multiplexing? Explain different types of multiplexing techniques and state their merits and demerits? [6M]

b) Describe different types of antennas and briefly explain Omni-directional antenna? [6M]

### (OR)

2. a) Explain the term interference in the space, time, frequency and code domain. What are counter measures in SDMA, FDMA and CDMA systems? [9M]

b) Write a short note on QPSK and QAM. [3M]

**UNIT – II**

1. a) Explain GSM system architecture? [8M]

b) Describe about UMTS. [4M]

**(OR)**

4. a) Explain 1G,2G,3G Mobile generations. [6M]

b) Describe GPRS architecture with a neat diagram. [6M]

**UNIT – III**

5. a) Draw a neat sketch of IEEE 802.11 and what is the role of DCF. [8M]

b) Explain the concept of Bluetooth. [4M]

### (OR)

6. Write short notes on the following: [12M]

a) Scatter net b) Pico net

**UNIT – IV**

7. a) How does dynamic source routing handle routing? What is the motivation behind dynamic source routing compared to other routing algorithms for fixed networks? [6M]

b) Compare reactive and proactive routing protocols. [6M]

### (OR)

8. a) What is Mobile IP? Describe the mobile IP protocol. Explain, with a diagram, how IP packets are transmitted between mobile nodes. Also, explain how the packet delivery mechanism in the mobile IP protocol differs from IP protocol.. [6M]

b) Describe control packets in AODV and Explain with packet formats. [6M]

**UNIT – V**

9. a) Write notes on the wireless transaction protocols focusing on WTP class 1 and WTP class 2 protocols? [6M]

b) Describe transaction-oriented TCP? How does the integration of connection establishment, data transmission and connection termination functions helpful for TCP communications. [6M]

### (OR)

10. a) Write brief notes on congestion control in traditional TCP. [4M]

b) Compare several enhancements to TCP for mobility. [8M]