

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII • EXAMINATION – SUMMER • 2015

Subject Code: 170702N

Date: 08/05/2015

Subject Name: Wireless Communication & Mobile Programming

Time: 02.30pm-05.00pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What are the different tiers in three-tier architecture of mobile computing? Describe the functions of these tiers. **07**
- (b) Briefly describe the following networks with example and application **07**
1. Wired network
 2. Wireless network
 3. Ad hoc network

- Q.2** (a) What are the essential functional differences between 1st generation, 2nd generation and 3rd generation of networks? **07**
- (b) Describe protocol stack of Bluetooth **07**

OR

- (b) What is Mobile IP? Explain tunneling in the context of Mobile IP **07**

- Q.3** (a) Draw and explain System architecture of GSM **07**
- (b) Describe different GSM addresses and identifiers **07**

OR

- Q.3** (a) What is handover/handoff? How handoff is different from roaming? **07**
- (b) Explain and differentiate between SM MT and SM MO **07**

- Q.4** (a) What is the difference between GSM and GPRS? How is data routing done in GPRS? **07**
- (b) Explain how mobile transport layer is different from TCP/IP transport layer **07**

OR

- Q.4** (a) Explain Direct sequence spread spectrum with example **07**
- (b) List types of wireless LAN. Differentiate between Ad hoc versus infrastructure mode. **07**

- Q.5** (a) Discuss 3G versus Wifi **07**
- (b) Explain Session Initiation protocol **07**

OR

- Q.5** (a) What is Mobile VoIP? Explain **07**
- (b) Explain security frameworks for mobile environment **07**
