

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VII EXAMINATION – WINTER 2015

Subject Code: 170702N**Date: 07/12/2015****Subject Name: Wireless Communication and Mobile Programming****Time: 10:30am to 1:00pm****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 is GSM? Explain how a call is routed in GSM with diagram. **07**
 (b) What is Internet Content Adaption Protocol (ICAP)? Explain its significance in communication applications. **07**
- Q.2** (a) Establish the relationship between PLMN and GPRS. Explain it using block diagram. **07**
 (b) What is CDMA? Explain the orthogonal codes for it. **07**
- OR**
- (b) How mobile IP works? Explain tunneling with mobile IP. **07**
- Q.3** (a) What is MANET? List its protocols and explain any one in detail. **07**
 (b) Discuss security issues with wireless networks. **07**
- OR**
- Q.3** (a) Explain Wi-Fi and Wi-Max technology in detail. Also discuss the differences. **07**
 (b) What is frequency hopping in spread spectrum? Explain TDMA in detail **07**
- Q.4** (a) Explain the functionality of HLR and VLR in call routing. **07**
 (b) What is RFID? Differentiate active and passive RFID with diagrams. **07**
- OR**
- Q.4** (a) Explain PUSH and PULL short messaging service in detail **07**
 (b) Explain WAE with its model with client, gateway and server. **07**
- Q.5** Attempt **ANY FOUR** **14**
 (a) Bluetooth Protocol Stack
 (b) IPv6
 (c) Piconet in Bluetooth
 (d) Message Oriented Middleware
 (e) Session Initiation Protocol (SIP)
 (f) 2G v/s 3G