

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE SEM-VII Examination-Nov/Dec.-2011**

**Subject code: 170702****Date: 22/11/2011****Subject Name: Mobile Computing****Time: 10.30 am-01.00 pm****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) Explain functional architecture of GSM system. And also give different tele-services provided by GSM. **07**  
(b) Explain about indirect & snooping TCP. Also give any two advantages of mobile TCP. **07**

- Q.2** (a) Explain concept of Bluetooth Architecture. What is the difference between infrastructure and ad-hoc networks? **07**  
(b) Explain functional architecture of GPRS system. What is the frequency range of uplink and downlink in GPRS network? **07**

**OR**

- (b) Define frequency hopping in spread spectrum? Write Note on TDMA , FDMA , CDMA **07**

- Q.3** (a) What are the possible handover scenarios in GSM? List out the numbers needed to locate a Mobile Station and to address the Mobile station **07**  
(b) Draw the mobile computing layer architecture of a car with GPS receiver , WAP , automatic parking lights control, smart-card based start and speech recognition. **07**

**OR**

- Q.3** (a) Mention some of the advantages and disadvantages of WLANs? Mention the design goals of WLANs? **07**  
(b) Explain MANET (Mobile adhoc network) and issues with moving node in network. **07**

- Q.4** (a) Explain RFID and DECT **07**  
(b) What is VoIP? Compare H.323 and SIP **07**

**OR**

- Q.4** (a) Compare Wifi Vs. 3G and also discuss wireless LAN security issues. **07**  
(b) Push and Pull in Short Messaging Service **07**

- Q.5** (a) Explain : Routing in IPv6 **07**  
(b) Applications of GPRS and VoIP **07**

**OR**

- Q.5** (a) Explain tunneling and encapsulation in mobile IP. **07**  
(b) State the requirements of WAP and explain different layers of WAP. What are the advantages of WML Script over WML? **07**

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