

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER-V • EXAMINATION – WINTER • 2014

Subject Code: 650016

Date: 08-12-2014

Subject Name: Wireless Communication Mobile Programming

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)** Answer the following in short. (Each carry one mark) : **07**
- (i) TCP Connection
 - (ii) Registration
 - (iii) Advertisement
 - (iv) Time out freezing
 - (v) AODV
 - (vi) H.323
 - (vii) SIP
- (b)** (i) Write a note on architecture for mobile computing, also explain three tier Architecture. **05**
- (ii) Write a note on History of Wireless Communication. **02**
- Q.2 (a)** Define the functionality of Bluetooth. Explain in detail protocol Stack of Bluetooth. Draw the frame structure of Bluetooth. **07**
- (b)** Define RFID. Differentiate between active RFID and passive RFID. List down the applications of active RFID and passive RFID. **07**
- OR**
- (b)** Explain 802.16 Standard in detail. Explain its operations with its advantages and disadvantages. **07**
- Q.3 (a)** Give the example for the following. **07**
- 1) Wireless Communication, 2) Ad Hoc Networks, 3) Mobile Computing through Internet, 4) 3G, 5) GPS 6) WSP 7) RFID.
- (b)** Give a brief idea about the architecture of GPRS. List down the applications. **07**
- How does billing and charging is done with GPRS.
- OR**
- Q.3 (a)** Give the example for the following. **07**
- 1) WLAN, 2) Ad Hoc Networks, 3) GSM Security, 4) WAP, 5) VoIP 6) 802.16 7) GPRS.
- (b)** How is mobile computing done over SMS? How to obtain value added service by means of SMS. Explain how to access a SMS Bearer. **07**
- Q.4 (a)** (i) Explain IPv6 Frame structure in detail. **05**
- (ii) What do you mean by Snooping TCP? **02**

- (b) (i) Differentiate between H.323 and SIP. **07**
(ii) Differentiate between 802.11 and 802.16.

OR

- Q. 4** (a) (i) How does indirect TCP work? Explain Mobile TCP in detail. **05**
(ii) Explain how selective retransmission is done. **02**
(b) (i) Differentiate between CDMA and GSM. **07**
(ii) Differentiate between GPRS and 3G.

- Q.5** (a) Explain MANET (Mobile Ad hoc Network). Explain what are the issues we face with faster moving nodes? **07**
(b) Give full form of the following: **07**
i) VHE
ii) CDMA
iii) PLMN
iv) MSRN
v) IMEI
vi) WTLS
vii) MSRN

OR

- Q.5** (a) What are the security issues faced by mobile technologies. Which security techniques are used to deter these attacks? Explain security framework in detail. **07**
(b) Give full form of the following: **07**
i) RTP
ii) SMS
iii) SIP
iv) VoIP
v) GPRS
vi) GSM
vii) SOC
