

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – WINTER • 2014

Subject code:1720101

Date: 02-12-2014

Subject Name: Wireless Networking & Mobile Computing

Time: 02:30 pm - 05:00 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 the handoff procedure in GSM system. Also explain it with relative signal strength with threshold; that is, a mobile switches from one cell to another --if the signal at the current BS is sufficiently weak (less than a predefined threshold) 07
- (b) Explain DHCP. How can DHCP be used for mobility and support of Mobile IP? 07
- Q.2 (a) Draw Bluetooth architecture. What are the advantages and problems of forwarding mechanisms in Bluetooth networks regarding security and power saving ? 07
- (b) Briefly explain about indirect and snooping TCP 07
- OR
- (b) Explain the concept of IEEE 802.11 medium access control layer 07
- Q.3 (a) Name the main elements of GSM system architecture and describe their functions. What are the advantages of specifying not only the radio interface but also the internal interfaces of the GSM system ? 07
- (b) What is the use of spread spectrum ? Explain working of DSSS. 07
- OR
- Q.3 (a) Explain Different Security algorithms used in GSM and different components used to implement them. 07
- (b) What is the use of spread spectrum ? Explain working of FHSS. 07
- Q.4 (a) What is the importance of WML and WML scripts in mobile computing? Write WML script for basic calculator functions like add, subtract, multiply and division of two integer numbers. 07
- (b) Explain architecture of WAP 2.0 and discuss its security issues in detail 07
- OR
- Q.4 (a) What is the importance of WML and WML scripts in mobile computing? Write WML script for displaying result as first class, distinction, pass class by entering percentage. 07
- (b) Briefly discuss the main goals of WAP. Explain the layers of WAP protocol. 07
- Q.5 (a) What are the general problems of mobile IP regarding security and support of quality of service? 07
- (b) Explain any two mobile OS with security issues in mobile OS. 07
- OR
- Q.5 (a) Compare FDMA, TDMA and CDMA. 07
- (b) Explain any two mobile OS with file handling management. 07
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