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GUJARAT TECHNOLOGICAL UNIVERSITY ME - SEMESTER- II (Old course) • REMEDIAL EXAMINATION - SUMMER 2015 Subject Code: 1720101 Date: 12/05/2015 Subject Name: Wireless Networking & Mobile Computing Time: 02:30 pm to 5:00 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 Two-Ray model for propagation of radio waves under mobile radio 07 environments. State the relationship between Pt and Pr. **(b)** Explain the two different types of links offered by Bluetooth? 07 (a) What is the difference between Digital Enhanced Cordless Telecommunication **Q.2 07** GSM? Also explain DECT system architecture reference model. **(b)** Draw and explain DSSS transmitter and receiver. 07 OR (b) What is Multiplexing? Explain Frequency Division Multiplexing and Code 07 Division Multiplexing. (a) Explain Bluetooth protocol stack with each layer in brief. Q.307 (b) Briefly Explain: AP, BSA, BSS, ESS in an IEEE 802.11 WLAN using 07 appropriate diagrams. OR Q.3(a) Explain Mobile IP. Why do we need it? Explain how Location and Handoff 07 management issues are usually implemented on mobile IP. (b) How and why does I-TCP isolate problems on the wireless link? List 07 advantages and disadvantages of I-TCP. **Q.4** (a) Write a WML and WML Script for Develop a Currency Convertor. 07 **(b)** Explain WAP 1.1 Architecture with figure. 07 What are the needs of security in mobile computing? Explain 3GPP security 0.4 07 (a) architecture for providing security in mobile computing. What is ns-2? What are the limitations of ns-2? Write an ns-2 script for creating **07** two nodes with duplex link between them. 0.5 (a) Why traditional OS does not work on mobile phone? List the mobile operating **07** system and explain any one? **(b)** What do you mean TCP over 2.5/3G wireless networks? Which characteristics 07 to be considered when deploying application over 2.5/3G wireless links. (a) Explain tunneling and reverse tunneling in mobile IP? 07 **Q.5** (b) Explain the frame control field of IEEE 802.11MAC data frame. Write the four 07 scenarios possible for Addressing associated with DS bits.
