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GUJARAT TECHNOLOGICAL UNIVERSITY ME – SEMESTER-1 (NEW) EXAMINATION – WINTER 2016

Subject Code: 2710209 **Subject Name: Wireless Communication** Time: 2:30 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 What is multiplexing? Explain various multiplexing techniques used in wireless **Q.1** 07 (a) communication. Also enlist merits and demerits of each. Write a short note on spread spectrum. Explain FHSS with suitable example. **07 (b) Q.2** Draw neat and clean diagram of GSM architecture. Explain it in detail. 07 (a) What is modulation? Give difference between analog and digital modulation. Explain 07 **(b)** FSK in detail. OR **(b)** Answer following 07 1. What is multipath propagation? Explain its effects on wireless communication. 2. Draw resulting signal after applying AFSK on following bit stream 1011010 **Q.3** Explain following terms **07** (a) 1. GGSN and SGSN 2. Hidden and exposed terminal problem Why conventional IP is not suitable in mobile network? Explain necessary changes 07 required to support mobility at network layer. 07 **Q.3** (a) Explain Bluetooth with its architecture. Explain M-TCP with its advantages and disadvantages. **07 (b) Q.4** (a) Explain steps involved in route establishment process of AODV protocol with suitable **07** example. What is the use of android manifest file? Explain some important elements of it. 07 **(b)** What is ad-hoc network? Explain DSDV protocol with example. 07 **Q.4** (a) **(b)** Explain the directory structure (various components) of android application. Also 07 explain various ways to access various resources in android application. **Q.5** (a) Explain 802.11 system architecture. 07 Write android application for creating basic calculator. **(b) 07** Explain the concept of tunneling and encapsulation with respect to mobile IP. 07 **Q.5** (a)

Write Android application for temperature conversion

(b)

07

Date: 05/01/2017