

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2018****Subject Code: 2170710****Date: 26/11/2018****Subject Name: Mobile Computing and Wireless Communication****Time: 10:30 AM TO 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) What is ARQ? What is importance of it? **03**  
(b) What is noise? Discuss briefly types of noise and its effect on transmission signal. **04**  
(c) Compare and contrast OSI model and TCP/IP protocol architecture. **07**

- Q.2** (a) What do you mean by channel capacity? What are the factors that affect it? **03**  
(b) Differentiate circuit switching and packet switching **04**  
(c) What is Mobile IP? Explain discovery, registration and tunneling in Mobile IP. **07**

**OR**

- (c) What is Direct Sequence Spread Spectrum technology? How does it work in CDMA technology? **07**
- Q.3** (a) Compare GSM and CDMA technology. **03**  
(b) Explain various transmission media w.r.t. merit, demerits and application of each. **04**  
(c) Explain functional architecture of GSM system and types of services provided by GSM. **07**

**OR**

- Q.3** (a) Define IMSI, IMEI and MS-ISDN and write significance of each. **03**  
(b) What is Handover? Explain types of it in brief. **04**  
(c) Explain IEEE 802.11 architecture and services. **07**
- Q.4** (a) Define following. **03**  
1) Fading  
2) Modulation  
(b) What are HLR and VLR? Describe its functions in call routing and roaming. **04**  
(c) Draw and explain Bluetooth Protocol Architecture. **07**

**OR**

- Q.4** (a) Define ASK, FSK & PSK. **03**  
(b) Describe Error Control Coding in brief. **04**  
(c) Discuss the network elements in GPRS that are different from GSM. Also discuss applications and limitations of GPRS. **07**
- Q.5** (a) Explain Android TextView control with an example. **03**  
(b) How billing and charging functions are handled in GPRS? **04**  
(c) Explain different layouts in Android. **07**

**OR**

- Q.5** (a) Explain Android ButtonView control with an example. **03**  
(b) Discuss briefly: Limitations of GPRS. **04**  
(c) Explain Android architecture with diagram. **07**

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