

I No

No

CS - 8303**B.E. VIII Semester**

Examination, June, 2013

**Wireless Network
(Elective-III)****Time : Three Hours****Maximum Marks : 100****Minimum Pass Marks :35**

Note: i) Attempt all questions.
ii) All questions carry equal marks.

1. a) Discuss briefly the different generations of wireless network. 10
- b) What is the Doppler spectrum and how one can measure it? 10

OR

2. a) Describe the unique problems that are faced in mobile communication. 10
 - b) Explain the radio propagation mechanism in mobile communication. 10
3. a) Name the five cell types in the cellular hierarchy and compare them in terms of coverage area and antenna site. 10
 - b) Explain the cellular design techniques that are needed to improve coverage and capacity in cellular systems. 10

OR

- a) Discuss the two important issues in mobility management? 10
- b) Explain briefly the following terms of cellular mobile system:
 - i) Reuse frequency
 - ii) Cell Area
 - iii) Reuse distance
 - iv) Co-Channel and adjacent channel interference. 10

5. a) Explain the term interference in the space time, frequency and code domain. What are counter measures in SDMA, TDMA, FDMA and CDMA systems. 10
- b) Write short notes :- 10
 - i) QPSK
 - ii) AM (Amplitude Modulation).

OR

6. a) Explain the data oriented CDPD network in detail. Also write the services offered by CDPD. 10
 - b) A TDMA system uses a 270-833 kbps data rate to support eight users per frame.
 - i) What is the raw data rate provided for each user.
 - ii) If guard time and synchronization occupy 10.1 kbps, determine the traffic efficiency.
 - iii) If (7,4) code is used for error handling, What is overall efficiency? 10
7. a) Compare IEEE 802.11, HyperLAN2 and Bluetooth with regard to their ad-hoc capabilities. 10
 - b) Give the physical specification summary of the DSSS and FHSS used by the IEEE 802.11. 10

OR

8. a) Draw and discuss the general MAC frame format of IEEE 802.11. 10
b) Discuss the basic architecture of a wireless ATM network with the help of diagram. 10
9. a) What is the rationale behind using different slot sizes in Bluetooth? Explain clearly. 10
b) What are the characteristics of Ad-Hoc Networks and explain some specific applications of adhoc network technology? 10

OR

10. a) Explain the architecture of Bluetooth system. What are the specific features of Bluetooth technology? 10
b) Give a brief note on 2.5G and 3G networks. 10
