

Code: 9D08201

M.Tech II Semester Supplementary Examinations January/February 2017

**WIRELESS NETWORKS**

(Computer Networks)

Time: 3 hours

Max. Marks: 60

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Discuss about the development and diversity of wireless networking technologies.  
(b) Explain the technology aspects of data link layer in wireless networks.
- 2 (a) List and explain various wireless network topologies. Discuss about the technical challenges involved in them.  
(b) Give pros and cons of spread spectrum in wireless networks. Illustrate frequency hopping spread spectrum and direct sequence spread spectrum with suitable examples.
- 3 (a) Discuss various factors that impact on the transmission, propagation and reception of radio waves.  
(b) What are the parameters to be considered to select a digital modulation technique for a specific application? Explain.
- 4 (a) Give overview and characteristics of IEEE 802.11 wireless LAN standards.  
(b) Explain the significance of DCF and PCF in 802.11 MAC layer.
- 5 (a) Discuss about user requirements and technical attributes for evaluating wireless LANs.  
(b) Describe briefly about voice over WLAN.
- 6 (a) Discuss the connection management followed in Bluetooth technology. Describe the steps involved in establishing internet connection from a PDA over Bluetooth.  
(b) Describe Zigbee characteristics and protocol stack.
- 7 (a) Explain 802.16 PHY layer employed in wireless MAN.  
(b) Explain briefly on key considerations of startup phase & operating phase in implementation of wireless MAN.
- 8 (a) Write a short note on LDPC and Turbo codes.  
(b) Explain data spread in OFDMA / MC-CDMA

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