

Reg. No. :

--	--	--	--	--	--	--	--	--	--

Question Paper Code: 45806

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Fifth Semester

Information Technology

14UIT506 - WIRELESS COMMUNICATION

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- Each channel occupies a different band of the frequency spectrum.
(a) FDMA (b) CDMA (c) TDMA (d) All of the above
- It Controls connection of wireless phone calls through the base stations to the PSTN
(a) MTS (b) MSC (c) Base station (d) All of the above
- It refers to sharing few channels among many users.
(a) sectoring (b) blocked call service
(c) Trunking (d) All of the above
- Standard telephone lines and conventional modems provide what is called
(a) Bluetooth service (b) dial-up service
(c) wireless service (d) WiFi service

5. Fading of the received radio signals in a mobile communication environment occurs because of
- (a) Direct propagation
 - (b) Bi-path propagation
 - (c) Multipath propagation
 - (d) None of the above
6. Doppler spread refers to
- (a) Signal fading due to Doppler shift in the channel
 - (b) Temporary failure of message transfer
 - (c) Large coherence time of the channel as compared to the delay constraints
 - (d) All the above
7. In _____ multiple access is achieved by allocating different time slots for the different users.
- (a) TDMA
 - (b) CDMA
 - (c) FDMA
 - (d) FGMA
8. Fading of the received radio signals in a mobile communication environment occurs because of
- (a) Direct propagation
 - (b) Multipath Propagation
 - (c) Bi-path Propagation
 - (d) None of these
9. The operational modes of DCF used in IEEE 802.11 networks are:
- (a) CSMA/CA and RTS/CTS
 - (b) Polling and CSMA/CA
 - (c) CSMA/CD and RTS/CTS
 - (d) Polling and RTS/CTS
10. This wireless standard is widely used to connect computers to each other and to the Internet.
- (a) 802.11
 - (b) RJ45
 - (c) Blueband
 - (d) Broadband

PART - B (5 x 2 = 10 Marks)

11. What are the channels used in mobile communication systems?
12. Mention the three partially separable effects of radio propagation.
13. Define doppler spread.
- .

14. What is MLSE?

15. What is Call handling?

PART - C (5 x 16 = 80 Marks)

16. (a) Discuss Frequency Reuse in detail with an example. (16)

Or

(b) Describe the frequency reuse of cellular systems. In what way reuse helps in improving coverage and capacity. Explain with suitable example. (16)

17. (a) Discuss Transmit and Receive signal model in detail. (16)

Or

(b) Explain the radio wave propagation and signaling schemes in detail. (16)

18. (a) What is fading? Describe the fading models for the distribution of the attenuation in detail. (16)

Or

(b) Explain the characteristics of mobile multipath channels. (16)

19. (a) Explain the linear and non-linear equalization methods. (16)

Or

(b) Summarize Channel state information performance over diversity techniques in detail. (16)

20. (a) Explain the GSM system architecture in detail. (16)

Or

(b) Discuss the CDMA digital cellular standard (IS-95). Give example. (16)

