Reg. No. :

Question Paper Code: 45806

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 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)

1. Which of the following is the main part of basic cellular system?

   (a) A mobile unit   (b) A mobile telephone switching office
   (c) A cell site   (d) All of the above

2. Expand MCHO.

   (a) Mobile Controlled Hand Off   (b) Mobile Carry Hand Off
   (c) Mobile Carrier Hand Of   (d) Mobile Current Hand Off

3. It refers to sharing few channels among many users.

   (a) sectoring   (b) blocked call service
   (c) Trunking   (d) All of the above

4. Standard telephone lines and conventional modems provide what is called

   (a) Bluetooth service   (b) dial-up service
   (c) wireless service   (d) WiFi service

5. Telephone systems may be classified as:

    (a) simplex and symmetrical   (b) simplex and asymmetrical

    (c) duplex and asymmetrical   (d) duplex and symmetrical

6. Which of these are Digital Cellular Technologies.

    (a) IS:54 / IS-136 – N America   (b) GSM – Europe and Asia

    (c) IS-95 – N America   (d) All of 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. What is IS 95?

    (a) a standard for cellular CDMA

    (b) a standard procedure for measuring indoor multipath propagation characteristics

    (c) the 1995 edition of the conference proceedings on Information Systems

    (d) a standard interconnecting base stations

10. The basic GSM is based on _____ traffic channels.

    (a) connection oriented   (b) connection less

    (c) packet switching   (d) circuit switching

PART - B (5 x 2 = 10 Marks)

11. Name the channel assignment strategies?

12. What is free space propagation model?

13. Define doppler spread.

14. What is MLSE?

15. What is Call handling?

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PART - C (5 x 16 = 80 Marks)

16. (a) Discuss briefly the overview and evolution of wireless communication 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) Explain the different path loss models 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) Summarize Rayleigh and Ricean distribution in detail. (16)

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

Or

(b) Explain Zero forcing and LMS algorithms. (16)

20. (a) Explain IEEE 802.11 a wireless LAN in detail. (16)

Or

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

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