M.E. Second Semester (Computer Science & Engineering) (F.T.) (CGS)
13151 : Elective : Mobile Computing : 2 RMEF 4 / 4 RME 2

P. Pages : 2

AW - 3680

Time : Three Hours

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* 1 0 2 6 *

Max. Marks : 80

Notes : 1. Assume suitable data wherever necessary.
2. Illustrate your answer necessary with the help of neat sketches.

1. a) Define the terms :   7
    i) Level Crossing Rate   ii) Fading Rate
    iii) Depth of Fading   iv) Fading Duration

    b) What are the steps for a call setup from MS to BS and Vice Versa? Enlist them and explain in brief.   7

OR

2. a) What are the important radio propagation issues? Explain why these issues are important in cellular system.   7

    b) In a measurement of power delay profile, the maximum excess delay is 50ns. Assuming exponentially decaying profile and Rayleigh fading channel, find out the maximum transmission bandwidth for which the data can be transferred with minimum ISI.   7

3. a) Explain :   7
    i) Cell Capacity   ii) Erlang B
    iii) Erlang C   iv) Efficiency

    b) Determine the distance from the nearest co-channel cell for a cell having. A radius of 0.64 km and a co-channel reuse factor of 12.   6

OR

4. a) List with diagrams reuse patterns of hexagonal cell structures. Explain the procedure of forming (labeling) cell clusters.   7

    b) What is co-channel interference? What is the significance of CIR?   6

5. a) Explain registration process between FA, MS and HA. Explain the message forwarding to the MS using HA – FA pair.   7

    b) List and explain the key features of IMT – 2000.   6

OR

6. a) Describe the handoff Scenario with different degrees of mobility (roaming suppar).   6

    b) Explain with the help of diagram how an AMPS system handles calls and various other responsibilities.   7

| 7. | a) | What are the similarities and differences between ad hoc networks and sensor networks? | 7 |
| | b) | Explain CGSR protocol. | 6 |

OR

| 8. | a) | What is routing? What are the goals of MANET routing? | 7 |
| | b) | Explain in brief characteristics and applications of MANETs. | 6 |

| 9. | a) | What are the advantages and drawbacks of UWB technology? Enlist them. | 7 |
| | b) | Differentiate with help of characteristics and examples WLAN, WMAN and WPAN. | 7 |

OR

| 10. | a) | What are the Bluetooth core protocols. How packet transmission takes place in Bluetooth? | 7 |
| | b) | Explain TC PDU format in brief. | 7 |

| 11. | a) | Explain with the help of diagram the basic functions of directional antenna. | 7 |
| | b) | Explain design issues in sensor networks. | 6 |

OR

| 12. | a) | Explain multicast in wireless networks. | 6 |
| | b) | Explain mobility and resources management for integrated systems. | 7 |

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