

Roll No. Total Pages : 03

BT-8/M-14 8810

WIRELESS AND MOBILE COMMUNICATION

ECE-402-E

Time : Three Hours] [Maximum Marks : 100

Note : Attempt *Five* questions in all, selecting *one* question from each Unit.

Unit I

1. Explain in detail the following :
 - (a) Coherence time 10
 - (b) Coherence band width. 10
2. (a) Explain the ground reflection model for radio wave propagation. 10
- (b) Explain the effect of shadowing in the wireless propagation of waves. 10

Unit II

3. Explain the main features and applications of spread spectrum communication. What is near-far problem ? 20

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4. Explain :

- (a) DS Spread Spectrum and
 - (b) Frequency Hopped Spread Spectrum.
- Draw the necessary diagrams to explain the signal transmission and reception. 10,10

Unit III

5. (a) What are advantages of hexagonal cell layout over triangular and square shape ? Explain with the help of diagrams. 10
- (b) Explain the following in brief :
 - (i) Spectrum Efficiency
 - (ii) Soft Capacity. 5,5

6. Write technical notes on :

- (a) Channel Allocation Schemes 5
- (b) Cellular CDMA. 10

Unit IV

7. (a) Explain in detail the GSM Traffic Channels. 8
- (b) Explain the various advantages of CDMA of TDMA and FDMA. Explain each access technique in brief. 12

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8. Explain the following in detail : Total Pages : 03
- (a) IS-95 10
 - (b) Mobility Management. 10