

IV B.Tech I Semester Supplementary Examinations, April/May 2005
CELLULAR & MOBILE COMMUNICATIONS
(Electronics & Telematics)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) How spectrum is utilized efficiently in mobile system explain each in detail with the suitable example?
(b) What do you mean by efficient spectrum utilization?
2. (a) How do you find the difference between the simulation results and practical results in mobile environment?
(b) Explain the handoff mechanisms in cellular systems?
3. Explain the designing of the omni directional antenna under the practical case conditions for $K = 7$, $K = 12$ and $K = 19$ with all the suitable values and explaining each of them?
4. (a) Briefly explain the factors considered for prediction of path loss for a particular mobile radio environment.
(b) Explain how antenna spacing and height are done at base station.
5. Describe the directional antenna patterns and the respective antenna arrangement.
(a) At the cell site
(b) Explain the diversity receiver.
6. Explain the terms in detail
(a) Adjacent channel assignment
(b) Channel sharing and borrowing
(c) Sectorisation
(d) Overlaid cells.
7. (a) What is meant by soft hand off? Give example.
(b) What is meant by hard hand off?
8. Present the concept of the narrow beam sector. How does it increase the traffic capacity? Consider $K = 7$.
