

Code No: 09A80401

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year II Semester Examinations, April - 2014

CELLULAR AND MOBILE COMMUNICATIONS

(Common to ECE, ETM)

Time: 3 Hours

Max. Marks: 75

Answer any Five Questions
All Questions Carry Equal Marks

- 1.a) Discuss the Factors influencing Short term Fading.
- b) Write short notes on First, Second, Third and fourth generation Cellular wireless systems.
- 2.a) Explain the concept of co-channel interference.
- b) Derive the expression for Desired C/I for a normal case in a Omni-directional antenna.
- 3.a) Discuss the significance of Frequency and Time diversity.
- b) Write short notes on measurement of real time Co-Channel interference.
- 4.a) What are the effects of Cross talk and UHF TV interference?
- b) Explain the significance of near and far end interference.
- 5.a) Explain the Mobile propagation over water and Flat open area.
- b) Obtain an expression for Power difference between Direct and Reflected paths.
- 6.a) What is the minimum separation of cell site antennas. Explain.
- b) Write short notes on directional antennas for interference reduction.
- 7.a) Explain Sectorization and Overlaid cells.
- b) Discuss the Channel assignments to cell sites and mobile units.
- 8.a) Explain the necessity for handoff and Power difference handoff.
- b) Write short notes Dropped call rates and their evaluation.
