

IEC-605: WIRELESS COMMUNICATIONS

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UNIT-I

Evolution of wireless systems:

Introduction to 1G, 2G, 3G & 4G systems, RF propagation, reflection, diffraction, scattering, propagation models, multipath fading, types of fading

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UNIT-II

Mobile Communication concepts

Mobile channels description, mobile call, frequency reuse, handoff strategies, co channel and adjacent channel interferences, improving coverage and capacity in cellular systems, cell splitting, sectoring, and microcell zone.

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UNIT-III

Multiple access techniques

SDMA, FDMA, TDMA, CDMA & it's spectrum efficiency

Wireless networks: ATM, Paging, WLL, Bluetooth, RFID & Cognitive radio

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UNIT-IV

Wireless Systems & Standards

GSM, personal satellite communication system, CDMA2000, WCDMA, 3G systems, UMTS

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UNIT-V

Traffic Engineering

Network traffic load and parameters, grade of service and blocking probability, Markov processes, birth-death processes, Poisson arrival process, holding time of calls, blocking models and loss estimates, lost calls cleared systems with infinite and finite subscribers, lost calls returned systems and lost calls held system, Delay systems and Erlang C formula.

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Text Book:

1. T.S.Rappaport, "Wireless Communications : Principle & Practice", 2nd Edition, Prentice Hall of India.From 2014-2015 & Onwards
2. T. Viswanathan/Telecommunication Switching Systems And Networks/PHI.

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