

R09

Code No: 58032

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year II Semester Examinations, May - 2016

WIRELESS COMMUNICATION AND NETWORKS

(Common to ECE, ETM)

Time: 3 Hours

Max. Marks: 75

**Answer any Five Questions
All Questions Carry Equal Marks**

- 1.a) Explain about the Public Switched Telephone Network (PSTN).
- b) Briefly explain evolution of mobile radio communication. [7+8]
- 2.a) Explain the logic link control of Bluetooth.
- b) Bring out the salient features of third generation wireless networks. [7+8]
- 3.a) Why sectorization of cell is very important and writes its advantages?
- b) What is hand-off process? Explain the hand-off mechanism?
- c) Prove that for a hexagonal geometry, the co-channel reuse ratio is given by $Q = \sqrt{3}N$, where $N = i^2 + ij + j^2$. [4+4+7]
- 4.a) Distinguish between FDMA and SDMA with a neat sketches.
- b) Explain in detail the operation of spread spectrum multiple accesses. [7+8]
- 5.a) Briefly explain about Traffic Routing in wireless networks.
- b) Discuss briefly about the development of wireless networks. [7+8]
- 6.a) Explain how location and management is achieved in GPRS?
- b) Explain about packet and frame formats in IS-95. [7+8]
- 7.a) Mention the functional requirements of Hyper LAN.
- b) Explain the functioning of WATM with basic architecture. [7+8]
- 8.a) Differentiate between Single channel system and Multi channel system.
- b) Derive mathematical representation of OFDM signal. [7+8]

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