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Total No. of Questions : 08

M.Tech. (ECE) (2018 & Onwards Batch) (Sem.-1)
WIRELESS AND MOBILE COMMUNICATION
Subject Code : MTEC-102-18
M.Code : 75173

Max. Marks : 60

1. Attempt any FIVE questions out of EIGHT questions.

2.Each question carries TWELVE marks.

- a) With the help of proper block diagram, explain GSM Signaling Protocol Architecture in detail.
 - b) Explain frequency management schemes of GSM. Define the term frequency-reuse.
- a) What is Co-channel channel interference? Explain different co-channel interference reduction techniques.
 - b) Define cell splitting its requirement. Explain 4:1 and 3:1 cell splitting process.
- a) Explain key physical layer parameters, architecture, and channel structure of IS95.
 - b) Describe forward and reverse link operation of IS95
- a) Compare FDMA, TDMA and CDMA on the basis of technical specification, advantages, disadvantages and applications.
 - b) Analytically compare the spectral efficiency of FDMA, TDMA and CDMA technology.
- a) Explain reflection and scattering phenomenon with respect to propagation of EM signal in free space.
 - b) What is large scale fading? Explain outdoor propagation model in detail.

6.
 - a) Distinguish between flat fading, frequency selective fading, slow and fast fading on the basis of channel parameters.
 - b) What is the relationship between coherence time and Doppler spread? Explain in detail.
7.
 - a) What do you understand by diversity? Explain and compare selection combining and equal gain combining.
 - b) What is the importance of equalizers in wireless communication system? Explain any one adaptive equalization technique.
8. Write a short notes on the following :
 - a) GPRS and EDGE
 - b) Soft and Hard Handoff
 - c) CDMA 2000

NOTE: Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.