



**SEVENTH SEMESTER B.TECH EXAMINATION, MAY 2013**  
(2004 Admission scheme)

**AI 04 705 B WIRELESS COMMUNICATION**

**Time : Three Hours**

**Maximum marks : 100**

- I. (a) State and explain Kepler's law  
 (b) List out the advantages of microwave communication  
 (c) Discuss the principle of Wireless LAN.  
 (d) Give a brief note on Second generation cellular networks.  
 (e) Explain the relevance of 'Hand off' in wireless communication. Briefly explain the strategies followed in 'Hand off'.  
 (f) Describe the practical link budget design using "Log Distance path loss model".  
 (g) Identify the differences between FDMA and TDMA  
 (h) What all are the features and services provided by GSM, Explain the types of registers involved in GSM architecture.

(8 x 5 = 40 marks)

- II. (a) Explain in detail about the FM microwave radio stations and its type

**OR**

- (b) (i) Discuss how spacing and frequency allocation is done in satellite communication.  
 (ii) Give a brief note on geostationary orbits.

- III. (a) Explain the generation of spreading sequence

**OR**

- (b) (i) Describe the operation of a CDMA multiple accessing system.  
 (ii) Write a note on Wireless local loop and LMDS.

- IV. (a) Discuss about how outdoor propagation models predicts the path loss in a mobile communication.

**OR**

- (b) Explain various cellular design techniques for improving the coverage and capacity in cellular systems.

- V. (a) Explain in detail about CDMA digital cellular standard IS-95.

**OR**

- (b) Write a note on  
 (i) Logical link control and adaptation protocol.  
 (ii) Bluetooth  
 (iii) Narrow band microwave LAN's.

(15 x 4 = 60 marks)

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