

M. Tech. Electronics & Communication Engineering (CBCS Pattern) Semester - II  
**PECS23 - Cellular & Mobile Communication**

P. Pages : 1

Time : Three Hours



**GUG/S/23/11032**

Max. Marks : 70

- Notes :
1. All questions carry marks as indicated.
  2. Answer **any five** questions.
  3. Assume suitable data wherever necessary.
  4. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Explain the frequency reuse concept in detail. Also state its advantages. 7  
b) Explain the different techniques used for improving the system capacity and coverage of wireless system. 7
2. a) Explain the wireless local loop with neat diagram. 7  
b) What is hand-off? Explain the process of hand-off and its type in brief. 7
3. a) Write a short note on: 7  
i) Co-channel interference  
ii) Adjacent channel interference  
b) Give the comparison at wi-fi, Bluetooth and zig – bee. 7
4. a) Explain standards of IEEE 802.11a/b/g super G in brief. 7  
b) Compare 2G, 2.5G, 3G and 4G. 7
5. a) Which mode of propagation is used by mobile phone? What are the factors that affects the propagation of radio waves? 7  
b) Enlist some of the outdoor propagation model. Write a short note on Okumara's model and state its merits & demerits. 7
6. a) What do you mean by small scale fading? What are the factors influencing the small scale fading? 7  
b) State and explain the principle of CDMA. How the capacity can be increased by CDMA? 7
7. a) What is free space propagation model? Define EIRP and explain path loss in brief. 7  
b) Explain in detail about OFDM modulation technique with necessary diagram. 7
8. a) What are the objectives of advanced Intelligent Network? Explain the various technologies used in AIN in brief. 7  
b) Which type of signaling method used in SS7? What transport layer does SS7 use? Enlist the feature of SS7. 7

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