

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

P. Pages : 1

Time : Three Hours



GUG/S/25/11032

Max. Marks : 70

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- Notes :
1. All questions carry marks as indicated.
 2. Due credit will be given to neatness and adequate dimensions.
 3. Assume suitable data wherever necessary.
 4. Solve **any five** questions.

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| 1. | a) | Explain the wireless local loop with neat diagram. | 7 |
| | b) | What are the advantages of delaying hand-off? With neat sketch explain two levels delaying hand-off. | 7 |
| 2. | a) | Explain the techniques for improving the system capacity and coverage of wireless system. | 7 |
| | b) | Explain the frequency reuse concept in detail. Also state its advantages. | 7 |
| 3. | a) | What is cell-splitting? Explain its types in detail about cell splitting. | 7 |
| | b) | Give the comparison of 3G, 4G and 5G technology. | 7 |
| 4. | a) | Explain the standards of IEEE802.11/a/b/g/ SuperG in brief. | 7 |
| | b) | Give the comparison of Wi-Fi, Bluetooth and Zig-bee. | 7 |
| 5. | a) | Which mode of propagation is used by mobile phone? What are the Factors that affects the propagation in radio waves? | 7 |
| | b) | Enlist some of the outdoor propagation models. Write a short note Okumura's model. Also state its merits and demerits. | 7 |
| 6. | a) | State and explain the principle of CDMA. How the capacity can be increased by CDMA. | 7 |
| | b) | What do you mean by small scale fading? What are the factors Influencing the small scale fading? | 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 techniques with necessary diagram. | 7 |
| 8. | a) | What do you understand by advanced Intelligent Network? Explain various technologies used in ATN in brief. | 7 |
| | b) | Explain in detail SS7? Enlist the feature of SS7. | 7 |
