

**Code No: R20A0417****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech II Semester Regular Examinations, May 2023****Wireless Communications****(ECE)**

<b>Roll No</b>									
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**Time: 3 hours****Max. Marks: 70**

**Note:** This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

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**SECTION-I**

- 1 Explain in detail the generation of Wireless Networks. [14M]

OR

- 2 Explain in detail the architecture of WLAN along with the protocols associated for communication [14M]

**SECTION-II**

- 3 a. Write in detail about Channel and Co-channel interference reduction factor [7M]  
b. Explain about Handoff strategies [7M]

OR

- 4 Explain in detail about Trunking and Grade of Service along with Cell Splitting [14M]

**SECTION-III**

- 5 What is fading? Explain about the types of small scale fading in Wireless Networks in detail. [14M]

OR

- 6 Discuss error performance of different modulation schemes in fading channels [14M]

**SECTION-IV**

- 7 Describe OFDM scheme and state the reason behind using cyclic prefix in OFDM scheme. What is PAPR? Why is it normally larger in a OFDM technique [14M]

OR

- 8 i) Illustrate Multiple access techniques [2M]  
a) TDMA [2M]  
b) FDMA [2M]  
c) CDMA  
ii) Compare various multiple access techniques with each other [8M]

**SECTION-V**

- 9 If a GSM uses a frame structure where each frame consists of 8 time slots, and each time slot contains 156.25 bits and the data is transmitted at 270.833 kbps in the channel, a) find the duration of the bits b) the time duration of the slot c) time duration of the frame and d) how long must a user occupying a single time slot wait between the two successive transmission [14M]

OR

- 10 Explain the GSM architecture and the protocols associated with it. [14M]

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