

Code No: **R18A0425****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

IV B.Tech - II Semester Advance Supplementary Examinations, June 2023**Wireless Communications & Networking**

(ECE)

Roll No									
----------------	--	--	--	--	--	--	--	--	--

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.

SECTION-I

- 1 *A* Describe the functioning of basic cellular telephone system? [7M]
 B Explain about paging system. [7M]

OR

- 2 *A* What are the advantages of 3G over 2G? What are the features of various 3G systems? [10M]
 B List the applications of WLAN. [4M]

SECTION-II

- 3 *A* What are the three basic mechanisms in mobile radio propagation? Explain in? detail [7M]
 B Explain about any one of indoor propagation model. [7M]

OR

- 4 *A* Derive Received Power Equation for Free Space propagation model. [7M]
 B If transmitter produces 50W of power, which is applied to a unity gain antenna with a 800MHz carrier frequency, find the received power in dBm at a free space distance of 120m from the antenna. What is $P_r(20\text{Km})$? [7M]

SECTION-III

- 5 *A* What are the small scale fading effects? What are the parameters that influence the small scale fading? [9M]
 B Explain the functioning of direct RF pulse system. [5M]

OR

- 6 *A* What are the various time dispersion parameters of mobile multipath channels? Explain [8M]
 B Describe about Clarke's model for flat fading. [6M]

SECTION-IV

- 7 Describe about the IEEE 802 Architecture and Services. [14M]

OR

- 8 Write short notes on IEEE 802.15 features and applications. [14M]

SECTION-V

- 9 *A* Describe about data oriented CDPD network. [7M]
 B Write short notes on mobile application protocols. [7M]

OR

- 10 *A* What is the function of WIRELESS ATM? Explain in detail. [7M]
 B Differentiate GSM and GPRS Systems. [7M]
