

Roll No.



**PRESIDENCY
UNIVERSITY**
BENGALURU

Department of Research & Development
Mid - Term Examinations - SEPTEMBER 2024

Odd Semester: Ph.D. Course Work	Date: 27 /09/2024
Course Code: ECE0815	Time: 2:00pm – 3:30pm
Course Name: Wireless Communication Networks	Max Marks: 50
Department: SOCSE	Weightage: 25%

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 5 marks.		4Qx5M=20M
1	Explain the types of wireless communication systems.	5 Marks
2	If a signal to interference ratio of 15 dB is required for satisfactory forward channel performance of a cellular system, what is the frequency reuse factor and cluster size that should be used for maximum capacity if the path loss exponent is (a) $n = 4$, (b) $n = 3$? Assume that there are 6 co-channels cells in the first tier, and all of them are at the same distance from the mobile. Use suitable approximations.	5 Marks
3	Compare Fixed Channel Allocation and Dynamic Channel Allocation?	5 Marks
4	Describe the various terms involved in trunking and grade of service.	5 Marks

Part B

Answer ALL Questions. Each question carries 15 marks.		2Qx15M=30M
5	Illustrate Handoff mechanism adopted in cellular communication detailing the condition for proper handoff with neat diagram.	15 Marks
6	Demonstrate your understanding on various multiple access techniques namely FDMA, TDMA and CDMA	15 Marks