Roll No: | | | | | | | | | | | |

PRESIDENCY UNIVERSITY

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

Presidency University Act, 2013 of the Karnataka Act No. 41 of 2013 | Established under Section 2(f) of UGC Act, 1956
Approved by AICTE, New Delhi | Approved By BCI
Bengaluru

Mid Term Examinations - October 2026

Date: 05/10/2026 **Time:** 11:45 AM - 01:15 PM

Course Code: ECE3056 **Course Name:** Wireless Communication and Networks

Semester: Seventh Semester **Max. Marks:** 50 **Weightage:** 50%

CO - Levels	CO1	CO2	CO3
Marks	12	32	46

PART A: Answer Following Questions. 10 M

Q.N.	Questions	M	CO	BT
1	Define FDD and TDD.	2	CO1	BT2
2	A cellular system uses a cluster size of 7 and each cell has a radius of 2 km. Find the co-channel reuse distance.	2	CO2	BT3
3	Calculate the traffic intensity in Erlangs for a group of 100 users making 30 calls in one hour, if the average call duration is 5 minutes.	2	CO3	BT4
4	What is trunking?	2	CO3	BT3
5	What is microcell concept?	2	CO3	BT3

PART B : Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
6	If a total of 33 MHz of bandwidth is allocated to a particular FDD cellular telephone system which uses two 25 kHz simplex channels to provide full duplex voice and control channels, compute the number of channels available per cell if a system uses (a) 4-cell reuse, (b) 7-cell reuse (c) 12-cell reuse. If 1 MHz of the allocated spectrum is dedicated to control channels, determine an equitable distribution of control channels and voice channels in each cell for each of the three systems.	10	CO2	BT3
7	Explain the concept of frequency re-use and the channel assignment strategies in detail.	10	CO2	BT3

PART C: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
8	Discuss in detail, the hand-off strategies implemented in a cellular network.	10	CO2	BT3
9	Derive the desired S/I in Co channel Interference for a Normal case and in worst case in an Omni directional antenna system.	10	CO3	BT4

PART D: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT

10	Explain the different types of wireless communication systems. Give suitable examples and applications of each type.	10	CO1	BT2
11	Describe about trunking and grade of service in a cellular network.	10	CO3	BT3

PART E: Answer Any 1 Following Questions. 10 M				
Q.N.	**Questions**	**M**	**CO**	**BT**
12	Explain in detail about Blocked Call Cleared Systems (BCC) and Blocked Call delayed Systems (BCD).	10	CO3	BT3
13	Write short notes on – (i) Cell Splitting (ii) Sectoring.	10	CO3	BT4