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Bengaluru

Mid Term Examinations - October 2026

Date: 07/10/2026 **Time:** 09:30 AM - 11:00 AM

Course Code: CSN2506 **Course Name:** 5G Networking

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

CO - Levels	CO1	CO2
Marks	46	44

PART A: Answer Following Questions. 10 M

Q.N.	Questions	M	CO	BT
1	State what is “False Alarm” in the context of spectrum sensing.	2	CO1	BT1
2	State two specific examples of URLLC (Ultra-Reliable Low Latency Connectivity) applications.	2	CO1	BT1
3	Define Path Loss.	2	CO1	BT1
4	Differentiate between Single-User MIMO and Multi-User MIMO.	2	CO2	BT2
5	List the three phases of the Cognitive Radio "Decision Loop".	2	CO2	BT1

PART B : Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
6	Explain how to achieve adaptive directivity.	10	CO1	BT2
7	Explain the three main pillars of 5G technology (eMBB, URLLC, mMTC)	10	CO1	BT2

PART C: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
8	Explain the 5G service-based architecture and its key network functions.	10	CO2	BT2
9	Describe the physical components of RAN and the evolution of RAN.	10	CO2	BT2

PART D: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
10	Explain how to achieve adaptive directivity.	10	CO1	BT2
11	Explain the three fundamental multi-antenna techniques used in 5G Massive MIMO.	10	CO1	BT2

PART E: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
12	Analyze the need for a new channel model for 5G.	10	CO2	BT4
13	Analyze the different MIMO configurations with block diagram for each.	10	CO2	BT4