



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.																			
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Mid - Term Examinations - MARCH 2026

Date: 10 - 03- 2026

Time: 02:00pm - 03:30pm

School: SOCSE	Program: CSN		
Course Code: CSN2506	Course Name: 5G Networking		
Semester: VI	Max Marks: 50	Weightage: 25%	

CO - Levels	C01	C02	C03	C04	C05
Marks	26	24			

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 2marks.

5Q x 2M=10M

1	Define "New Radio" (NR) in the context of 5G.	2 Marks	L1	C01
2	State the names of three different diversity techniques used in 5G.	2 Marks	L1	C01
3	Define "White Spaces" in the radio spectrum.	2 Marks	L1	C01
4	Differentiate between Single-User MIMO and Multi-User MIMO.	2 Marks	L2	C02
5	List the three phases of the Cognitive Radio "Decision Loop".	2 Marks	L1	C02

Part B

Answer the Questions.

Total Marks 40M

6.	a.	Explain the three main pillars of 5G technology (eMBB, URLLC, mMTC)	10 Marks	L2	CO1
Or					
7.	a.	Explain the different propagation scenarios and channel model requirements for 5G communications.	10 Marks	L2	CO1

8.	a.	Describe how a service-driven architecture allows for dynamic adaptation to the three pillars of 5G use cases.	10 Marks	L2	CO2
Or					
9.	a.	Explain the concept of Multi-Radio Dual Connectivity (MR-DC) and how it ensures seamless coexistence between 4G and 5G.	10 Marks	L2	CO2

10.	a.	Analyze the functional architecture of 5G with a focus on Network Function Virtualization(NFV) and Software Defined Networking(SDN).	10 Marks	L4	CO2
Or					
11.	a.	Analyze the three fundamental multi-antenna techniques used in 5G Massive MIMO.	10 Marks	L4	CO2

12.	a.	Describe Software Defined Radio (SDR) with relevance to 5G. Also draw the block diagram of SDR system.	10 Marks	L2	CO1
Or					
13.	a.	Describe Cognitive Radio. Summarize it's key functions.	10 Marks	L2	CO1