PRESIDENCY UNIVERSITY

BENGALURU

Make up Examinations – December 2025

Date: 31 – 12- 2025   **Time:** 09:30am – 12:30pm

School: SOCSE	**Program:** B.Tech(CSE)
Course Code : CSE3090	**Course Name:** 5G Networking
Semester: MK	**Max Marks**: 100 **Weightage**: 50%

CO - Levels	CO1	CO2	CO3	CO4
Marks	14	26	36	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.   **10Q x 2M=20M**

1.	What is a spectrum toolbox?	2 Marks	L1	CO1
2.	Differentiate between 4G and 5G.	2 Marks	L1	CO1
3.	List some features of enhanced Multi-RAT.	2 Marks	L1	CO2
4.	What is distributed RAN?	2 Marks	L1	CO2
5.	List some functions of RRC.	2 Marks	L1	CO2
6.	List some features of 4G LTE for D2D communication.	2 Marks	L1	CO3
7.	What is the importance of resource allocation?	2 Marks	L1	CO3
8.	Differentiate between centralized and decentralized schedulers.	2 Marks	L1	CO3
9.	What is token passing?	2 Marks	L1	CO4
10.	Differentiate between FDMA and CDMA.	2 Marks	L1	CO4

Part B

Answer the Questions.   **Total Marks 80M**

11.	a.	Discuss Lean System Control Plane.	10 Marks	L2	CO1
		Or			
12.	a.	Explain Dynamic Radio Access Network(DRAN.	10 Marks	L2	CO1

13.	a.	Describe architecture of RAN.	10 Marks	L1	CO2
		Or			
14.	a.	Discuss high-level requirements for the 5G architecture.	10 Marks	L1	CO2

15.	a.	Explain the physical architecture of 5G.	10 Marks	L1	CO2
		Or			
16.	a.	Discuss the concept of Software Defined Networking.	10 Marks	L2	CO2

17.	a.	Explain multi-hop D2D communications for proximity and emergency services.	15 Marks	L1	CO3
		Or			
18.	a.	Discuss 5G D2D RRM concept using suitable diagram.	15 Marks	L3	CO3

19.	a.	Explain RRM techniques for mobile broadband D2D	15 Marks	L3	CO3
		Or			
20.	a.	Discuss the importance of national security and public safety requirements in 3GPP and METIS.	15 Marks	L3	CO3

21.	a.	Explain Spread spectrum multiple-access system using suitable diagram.	20 Marks	L2	CO4
		Or			
22.	a.	Discuss Orthogonal multiple-access systems. Use appropriate block diagram.	20 Marks	L2	CO4