

Register No : _____

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Fifth Semester

Electronics and Communication Engineering

CEC331 – 4G/5G Communication Networks

Regulations - 2021

Duration : 3 Hrs

Maximum : 100 Marks

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	What is the importance of 5G technology for society?	RE	1	2
2.	List the different types of RAN deployment.	RE	1	2
3.	Construct beamforming? List out its types with figures.	RE	2	2
4.	Identify the significant radio access technologies suitable for 5G deployment.	AP	2	2
5.	Recall the significance of network repository function (NRF)?	RE	3	2
6.	What is the significance of GRE?	RE	3	2
7.	Define spectrum trading.	RE	4	2
8.	Name the method which is used to allocate spectrum and highlight its performance.	RE	4	2
9.	Build the architecture of security domain.	AP	5	2
10.	Name the various security features in the network access security.	RE	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a What is radio access network? What are the functions provided by RAN?	UN	1	13
	Or			
	b Explain the network functions performed by 5G NG core architecture?	UN	1	13
12.	a i List the key EPC functions? Explain.	UN	2	7
	ii Interpret in detail about radio access technologies?	UN	2	6
	Or			
	b Explain about 5G's new radio and cloud technology?	UN	2	13
13.	a Outline about Multi access Edge Computing (MEC)? Describe its architecture and also explain about edge computing?	UN	3	13
	Or			
	b What is IPSec? Explain the service provided by IPSec and discuss about NG application protocol?	UN	3	13

14. a Define dynamic spectrum sharing? What advantages does dynamic spectrum sharing offer? How do LTE users benefit from dynamic spectrum sharing? Explain.

Or

b Illustrate 5G mobility management? Explain the general principles and its categories?

15. a Infer about the Quality of Service (QoS)? Explain the working of flow based QoS?

Or

b Explain the various threats in 5G and the ways to mitigate them?

*PART – C (Marks 1*15 = 15)*

<i>Q.No</i>		<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
16.	a	Define network slicing? Explain its requirements, architecture, benefits and management in detail. Discuss the same for network of 100 users.	UN	3	15
		Or			
	b	Elaborate NFV and VEPC? Explain its need, architecture and benefits in detail. Give a real time example with implementation of NFV.	UN	1	15