

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV/DEC 2025***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.	List the characteristics of second generation 2G Networks.	L1	1	2
2.	Compare AuC and MSC in mobile networks.	L2	1	2
3.	Define virtualization.	L1	2	2
4.	List few unique challenges hold by 5G communication.	L1	2	2
5.	What is network slicing and list its benefits?	L1	3	2
6.	What are the security services provided by IPsec?	L1	3	2
7.	How mobility management functions are utilized in LADN?	L1	4	2
8.	How 5GC assistance information divided?	L1	4	2
9.	What is Extensible Authentication Protocol?	L1	5	2
10.	Distinguish between Network Access Security and Network Domain Security.	L2	5	2

PART - B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a Summarize the various network evolution with respect to 2G,3G and 4G, compare all these networks and justify how 4G is much better than the other generation networks.	L2	1	16
	Or			
	b Compare 4G and 5G. Design the architecture of next generation core supports both International Mobile Subscriber Identity (IMSI) based and non-IMSI based identities for authentication of services.	L2	1	16
12.	a i Explain in detail about the fundamentals of 5G technologies.	L2	2	8
	ii Illustrate simplified 5G Core Architecture in detail.	L2	2	8
	Or			
	b Write short notes on Radio access technologies and explain in detail about the simplified architecture of EPC for 5G networks	L2	2	16
13.	a Discuss about Network slicing and explain its requirements, architecture, benefits and management.	L2	3	16
	Or			
	b Illustrate Multi access edge computing and end to end system architecture in detail.	L2	3	16

14.	a	Analyze mobility management and also discuss how it establishing connectivity as well as Updating Mobility Registration.	L4	4	16
		Or			
	b	Analyze millimeter wave and cognitive radio based on 5G networks.	L4	4	16
15.	a	Explain about Security features in 5G networks and Security aspects of Service Based interfaces.	L2	5	16
		Or			
	b	Explain in detail about flow based QoS framework and summarize 5G QOS parameter with detailed description.	L2	5	16