Register No : _____

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2026

Third Semester

Computer science and Engineering

PCST2403 - NETWORK TECHNOLOGIES

Regulations - 2024

Duration: 3 Hrs. ***Maximum: 100 Marks***

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

Q.No	Questions	BTL	CO	Marks
1.	Which is more secure: Peer-to-Peer or Client-Server? Why?	L2	1	2
2.	Define Network Throughput.	L1	1	2
3.	Mention two frequency bands used in IEEE 802.11g.	L1	2	2
4.	Interpret the significance of Zigbee in IoT.	L2	2	2
5.	Classify multiple access techniques used in 4G and 5G.	L4	3	2
6.	Differentiate between composite radio environments and hybrid 4G protocols.	L2	3	2
7.	Classify the functions of the Data Plane in SDN.	L4	4	2
8.	State the purpose of Southbound Interface.	L2	4	2
9.	Compare VLANs and VPNs with respect to isolation and security.	L2	5	2
10.	Which is more effective for future networks: SDN or NFV? Justify.	L2	5	2

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

Q.No			Questions	BLT	CO	Marks
11.	a		Explain with diagrams the working of Hub, Switch, Router, and Firewall in a network.	L1	1	16
			Or			
	b	i	Describe the layers of the OSI model and their functions.	L1	1	8
		ii	Discuss LAN vs. WAN in terms of characteristics, advantages, and limitations.	L1	1	8
12.	a		Explain the evolution of IEEE 802.11 standards from 802.11a to 802.11be with features and applications.	L2	2	16
			Or			
	b	i	Illustrate the use of Bluetooth profiles in various applications (audio, health devices, IoT).	L2	2	8

		ii	Explain the concept of Zigbee communication in designing a smart home network.	L2	2	8
13.	a		Explain 4G and 5G Networks and compare their performance in air interface.	L5	3	16
			Or			
	b		Evaluate a 5G-enabled smart city network architecture incorporating CRAN, MIMO, and network slicing.	L5	3	16
14.	a	i	Compare the SDN Control Plane and Data Plane architectures with respect to functions.	L4	4	8
		ii	Analyze the role of Group Table and Multiple Tables in packet handling.	L4	4	8
			Or			
	b		Analyze a sample SDN-based enterprise network showing the interaction of Application, Control, and Data planes.	L4	4	16
15.	a		Design NFV deployment in large-scale telecom networks and evaluate the challenges.	L6	5	16
			Or			
	b		Design a virtualized network architecture for an enterprise using NFV concepts (VNFs, MANO, NFVI).	L6	5	16

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