Reg. No.														

Question Paper Code	12988

M.E. / M.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2024
Second Semester

M.E. - Computer Science and Engineering
20PCSPC201 - NETWORK DESIGN AND TECHNOLOGIES
Regulations - 2020

Duration: 3 Hours   Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

		Marks	K-Level	CO
1.	Define Multiplexing.	2	K1	CO1
2.	Compare SLIP and PPP.	2	K2	CO1
3.	List the advantages of WiMAX.	2	K1	CO2
4.	Differentiate WLAN and UMTS.	2	K2	CO2
5.	What is GSM?	2	K1	CO3
6.	List out the Network Elements in cellular network.	2	K1	CO3
7.	Define LTE.	2	K1	CO4
8.	What are the advantages of 4G Networks?	2	K1	CO4
9.	What do you mean by SDN Network?	2	K1	CO5
10.	Define Virtualization in overlay networks.	2	K1	CO5

PART - B (5 × 13 = 65 Marks)
Answer ALL Questions

			Marks	K-Level	CO
11.	a)	Explain about the concept of OFDM with neat diagram.	13	K2	CO1
		OR			
	b)	Discuss about required network components needed for designing a network.	13	K2	CO1
12.	a) i)	Describe the architecture of Mobile WiMAX IEEE 802.16e.	8	K2	CO2
	ii)	Explain about Network infrastructure of WLAN.	5	K2	CO2
		OR			
	b) i)	Explain about Bluetooth Protocol Stack in Wireless Networks.	8	K2	CO2
	ii)	Summarize QoS in wireless networks.	5	K2	CO2
13.	a) i)	Discuss about GSM Network architecture in detail.	8	K2	CO3
	ii)	Compare GPRS with EDGE.	5	K2	CO3
		OR			

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create   **12988**

b) i) Discuss about MMS over GPRS with neat diagram.	8	K2 CO3
ii) Describe the advantages of UMTS Security.	5	K2 CO3

14. a) i) Illustrate LTE Architecture with neat diagram in detail.	8	K2 CO4
ii) Compare the features of UMTS with GSM.	5	K2 CO4

OR

b) i) Explain the hybrid 4G wireless Network Protocols.	8	K2 CO4
ii) Interpret on channel modelling in 4G.	5	K2 CO4

15. a) i) Briefly Explain about network overlays and its types.	8	K2 CO5
ii) Compare Centralized and Distributed SDN.	5	K2 CO5

OR

b) i) Explain about design of SDN Framework.	8	K2 CO5
ii) Infer SDN controllers.	5	K2 CO5

PART - C (1 × 15 = 15 Marks)

16. a) i) Analyze about Code division multiplexing with neat diagram.	8	K4 CO1
ii) Describe about core and distribution networks.	7	K4 CO1

OR

b) i) Discuss in detail about the mobility management and power optimization.	8	K4 CO3
ii) Discuss the salient features of 4G and 5G networks.	7	K4 CO3