Reg. No.															

Question Paper Code	14109

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2025

Sixth Semester

Electronics and Instrumentation Engineering

20ESCS601 - COMPUTER NETWORKS

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	Which OSI layer ensures reliable delivery? (a) Network (b) Transport (c) Data Link (d) Session	1	K1	CO1
2.	TCP/IP belongs to which model? (a) OSI (b) Hybrid (c) Proprietary (d) None	1	K1	CO1
3.	PPP is used in: (a) Wireless LAN (b) WAN (c) Ethernet (d) Token Ring	1	K1	CO2
4.	Bluetooth operates in: (a) 5 GHz (b) 2.4 GHz (c) 1 GHz (d) 8 GHz	1	K1	CO2
5.	IPv6 header size is: (a) 20 bytes (b) 40 bytes (c) 60 bytes (d) 80 bytes	1	K1	CO3
6.	ICMP is mainly used for: (a) Routing (b) Error reporting (c) FTP transfers (d) Encryption	1	K1	CO3
7.	SCTP belongs to which layer? (a) Network (b) Transport (c) Application (d) Data Link	1	K1	CO4
8.	Identify the port of SSH: (a) 20 (b) 22 (c) 25 (d) 110	1	K2	CO4
9.	Which protocol is used for browsing the web? (a) DNS (b) SMTP (c) HTTP (d) ICMP	1	K1	CO5
10.	DNS follows which structure? (a) Flat (b) Hierarchical (c) Peer (d) Ring	1	K1	CO5

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

		Marks	K – Level	CO
11.	Define protocol layering.	2	K1	CO1
12.	What is the need for OSI model?	2	K1	CO1
13.	What is the purpose of link-layer addressing?	2	K1	CO2
14.	List the services of IEEE 802.11.	2	K1	CO2
15.	What are the features of network layer performance?	2	K1	CO3
16.	Define multicast routing.	2	K1	CO3
17.	Explain the term “port numbers.”	2	K2	CO4
18.	What are the two features of TCP?	2	K1	CO4
19.	What is FTP?	2	K1	CO5
20.	List any two applications of SNMP.	2	K1	CO5
21.	What is the use of transmission media?	2	K1	CO1
22.	Define packet switching.	2	K1	CO1

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23.	a)	Explain OSI model functions in detail.	*11*	*K2*	*CO1*
		OR			
	b)	Explain protocol layering with suitable examples.	*11*	*K2*	*CO1*
24.	a)	Illustrate the Ethernet architecture and frame structure with neat diagrams.	*11*	*K2*	*CO2*
		OR			
	b)	Explain WLAN architecture and IEEE 802.11 operations.	*11*	*K2*	*CO2*
25.	a)	Explain IPv6 addressing and packet format.	*11*	*K2*	*CO3*
		OR			
	b)	Explain the working of Distance Vector routing algorithm.	*11*	*K2*	*CO3*
26.	a)	Explain the TCP flow control and congestion control.	*11*	*K2*	*CO4*
		OR			
	b)	Compare UDP, TCP and SCTP protocols.	*11*	*K2*	*CO4*
27.	a)	Explain the working of DNS and its hierarchy.	*11*	*K2*	*CO5*
		OR			
	b)	Explain in detail about HTTP.	*11*	*K2*	*CO5*
28.	a)	Explain the types of switching with examples.	*11*	*K2*	*CO1*
		OR			
	b)	Explain various types of network topologies.	*11*	*K2*	*CO1*