K. K. Wagh Institute of Engineering Education & Research, Nashik

(An Autonomous Institute From A.Y. 2022-23)

WINTER-2025	
Exam Seat No.:	
Academic Year:2025-2026	Semester:IV
Class:SY	Program:B.Tech
Branch Code:ADS/COM/CSD	Pattern:2023
Name of Course:Data Communication and Networking	Course Code:2301216
Max. Marks:60	Duration:2.30 Hrs.

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains 2 page(s).
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

		Marks	CO
Question No. 1			
1	Explain Data Transmission concepts and its mode	(6)	CO1
Question No. 2			
2	Explain Stop-and-Wait and Go-Back-N protocol	(6)	CO2
Question No. 3			
3.a)	Explain circuit switching, packet switching, and message switching with examples.	(6)	CO3
	OR		
3.b)	Explain IPv6 Compare it with IPv4.	(6)	CO3
3.c)	Explain the functionality of BGP in managing routing decisions between networks on the internet. How can it influence data traffic patterns?	(6)	CO3
	OR		
3.d)	Explain the working of the Routing Information Protocol (RIP) and Open Shortest Path First (OSPF). Compare their features and differences.	(6)	CO3
3.e)	Explain the working of ARP, ICMP protocol in network communication	(4)	CO3
	OR		
3.f)	Compare Static and Dynamic Routing	(4)	CO3
Question No. 4			
4.a)	Explain the importance of error detection in transport layer protocols.	(6)	CO4
	OR		
4.b)	Explain the Quality-of-Service Parameter in Computer Network.	(6)	CO4

4.c)	Explain 3-way handshaking in Transport layer	(6)	CO4

OR

4.d)	Explain Flow Control in Transport Layer.	(6)	CO4
4.e)	Compare SCTP, RTP protocol	(4)	CO4

OR

4.f)	Explain TCP and UDP	(4)	CO4

Question No. 5

5.a)	Explain DHCP in detail with its components.	(6)	CO5

OR

5.b)	Explain DHCP and MIME	(6)	CO5
5.c)	Explain the concept of web caching. How does it improve the performance of web applications?	(6)	CO5

OR

5.d)	Explain FTP, and how does it facilitate file transfers over a network?	(6)	CO5
5.e)	Explain SMTP and its functions	(4)	CO5

OR

5.f)	Explain TELNET with its diagram	(4)	CO5

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