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:VII
Class:FINAL	Program:B.Tech
Branch Code:ETC	Pattern:2022
Name of Course:Computer Networks	Course Code:ETC224002
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			
1a)	Elaborate different types of networks like LAN, MAN and WAN. Also give examples.	(6)	CO1
Question No. 2			
2a)	Explain polling and token-passing mechanisms in controlled access protocols.	(6)	CO2
Question No. 3			
3a)	Determine subnet address for 190.240.34.95 if subnet mask is given /19. Write default subnet masks for Class A, B and C.	(8)	CO3
	OR		
3b)	What do you mean by classful addressing? Differentiate between classful addressing and classless addressing (CIDR) with examples.	(8)	CO3
3c)	Explain various transition methods from IPv4 to IPv6.	(8)	CO3
	OR		
3d)	Elaborate Distance Vector Routing algorithm. What is count to infinity?	(8)	CO3
Question No. 4			
4a)	Discuss the importance of Quality of Service (QoS) in transport-layer communication. How do QoS parameters such as latency, jitter, and packet loss influence the communication?	(8)	CO4
	OR		
4b)	What are the main objectives of transport layer? Explain with neat diagram process to process delivery in transport layer.	(8)	CO4
4c)	What is congestion control in TCP? Describe open loop and closed loop policies in detail.	(8)	CO4
	OR		

4d)	Explain the Leaky Bucket and Token Bucket models. How do they differ in traffic shaping and policing?	(8)	CO4

Question No. 5

5a)	Enlist different networking commands. Explain the working of Ping and how it uses the ICMP protocol for connectivity testing.	(8)	CO5

OR

5b)	What is FTP, and how do its control and data connections work?	(8)	CO5
5c)	Explain the HTTP request and response model with an example.	(8)	CO5

OR

5d)	Define Software-Defined Networking (SDN) and explain its core concept.	(8)	CO5

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