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22SCN/SCS13

First Semester M.Tech. Degree Examination, Jan./Feb. 2023

Advances in Computer Networks

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.

2. M : Marks , L: Bloom's level , C: Course outcomes.

Module – 1				M	L	C
Q.1	a.	Explain network architecture.	10	L2	CO1	
	b.	Explain sliding window algorithm.	10	L2	CO1	
OR						
Q.2	a.	Explain : i) Scalable connectivity ii) Manageability	10	L2	CO1	
	b.	Difference between i) Bandwidth and latency ii) Delay and Bandwidth product	10	L2	CO1	
Module – 2						
Q.3	a.	Explain Bridges and LAN switches.	10	L2	CO1	
	b.	Explain IPV ₄ packet header.	10	L2	CO1	
OR						
Q.4	a.	Explain Class A, Class B and Class C address.	10	L2	CO1	
	b.	Explain subnetting and classless Address.	10	L2	CO1	
Module – 3						
Q.5	a.	Explain how network is represented as graph and elaborate on Distance Vector (RIP)	10	L2	CO2	
	b.	Explain flooding of link state packets.	10	L2	CO2	
OR						
Q.6	a.	Explain Dijkstra's shortest path algorithm and mention steps involve in this algorithm.	10	L2	CO2	
	b.	Explain : i) Address and Routing ii) Address space allocation iii) Address notation	10	L2	CO2	

Module – 4					
Q.7	a.	Explain silly window syndrome and Nagle's algorithm.	10	L2	CO2
	b.	Explain FIFO and Fair Queuing.	10	L2	CO2
OR					
Q.8	a.	Explain Fast Retransmit and Fast Recovery.	10	L2	CO2
	b.	Explain slow start Wien packet diagram.	10	L2	CO2
Module – 5					
Q.9	a.	Explain Network Management (SNMP)	10	L2	CO3
	b.	Explain Domain Hierarchy with neat diagram.	10	L2	CO3
OR					
Q.10	a.	Explain electronic mail considering SMTP, POP, IMAP, and MIME.	10	L2	CO3
	b.	Explain Source based congestion Avoidance	10	L2	CO3
