



Daffodil International University

Faculty of Science & Information Technology

Department of Computer Science & Engineering

Final Semester Examination, Fall 2024

Course Code: 313, Course Title: Computer Networks

Level: 3 Term: 1 Batch: 61

Time: 2:00 Hrs

Marks: 40

Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

1.	a)	Imagine you have a company network requiring different segments: Admin (30 hosts), Sales (40 hosts), and Support (20 hosts). You have an IP block of 192.168.20.0/24. Design the sub netting plan with the Network Address, Broadcast Address, Subnet Mask, and Usable IP Range for each department.	5	CO2
	b)	Show the forwarding process if a packet with destination address 180.70.65.120 reaches at router 1.	5	
		<p style="text-align: right;">25 24 22 26</p>		
2.	a)	Explain how IPV6 solves limitations of IPV4	5	CO2
	b)	How 5 column based NAT solves the problem of 2 column based NAT. Explain with appropriate figures	5	
3.	a)	What is IEEE802.11? Explain the components of it with figure. <i>স্বা</i>	5	CO4
	b)	What are the major components of secure communication? Differentiate between symmetric and asymmetric Key encryption.	5	
4.	a)	Discuss the process of end to end congestion control in mitigating congestion in communication networks.	5	CO2
	b)	Show the process of load balancing of data center step by step	5	

বাঁচতে চাইলে পনের ডেইলি থেকে প্রতিদিন পড়তে বসে
 বাপিতে হুয়ানি

slow utilization low