



Daffodil International University  
Department of Computer Science and Engineering  
Faculty of Science & Information Technology  
Midterm Examination, Fall 2024  
Course Code: 313, Course Title: Computer Networks  
Level: 3 Term: 1 Batch: 61

Time: 01:30 Hrs

Marks: 25

Answer ALL Questions

1.	How does packet switching improve the efficiency of Internet data transmission compared to circuit switching?	[5 ]	CO 1
2.	Suppose a user entered <a href="http://www.diu.edu.bd/cse/program.index">www.diu.edu.bd/cse/program.index</a> (contains 1-15 png images). Explain the entire process to download the images using non persistent HTTP.	[5 ]	CO 2
3.	Apply the link state routing algorithm and find out the shortest path from A to C.	[5 ]	CO 3
4.	You have been assigned the IP address block 192.168.10.0/24. Your organization needs to create 10 subnets to accommodate different departments each holding 16 hosts.  Determine the new subnet mask that can be accommodated in each subnet with the new subnet mask.	[3 ]	CO 3
5.	A large organization has been allocated the IP address block 172.16.0.0/16. The organization needs to subnet this block to accommodate various departments with the following requirements:  HR Department has 64 customer and each needs 256 IP. Finance Department has 128 customer and each needs 128 IP. IT Support has 128 customer and each needs 128 IP.	[7 ]	CO 3
a	Determine the subnet mask for each department.		
b	Design the sub blocks for each department with the range of subnets.		
c	Calculate how many addresses are used in each department.		

\* দ্বীন ও ছুনিয়া প্রক্সারে অর্জন করতে 'কুসমান ওয়াহ' ব্যক্তি অন্য  
কোন পথে নেই, যদিও গানে হবে, ছুনিয়া অমূল্য থেকে যাচ্ছে।  
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ড. বিনোদ ফারুক