

1058
B.E. (Information Technology)
Fourth Semester
IT-422: Computer Networks
(May – 2013)

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Part.

x-x-x

Q1.	What are the key elements of a protocol?	
a)		
b)	What are Generic Domains ?	
c)	Define forwarding in Network layer.	
d)	What do you mean by redundancy?	
e)	Write down different port address used in Transport Layer	(5*2=10)
Part A		
Q2.	Explain the concept of switching. Compare circuit switching and packet switching.	
a)		(5,5)
b)	What does multiplexing means? Explain FDM with the help of diagram.	
Q3.	If 1010000 is the original messages and $X^3 + 1$ is generator polynomial, then calculate the data stream send by sender .	
a)		
b)	10011001 11100010 00100100 10000100 is original data with $k=4$ & $m=8$ (where k is no. of total data units and m is no. of bits per data unit). If 11011010 is the checksum of original data , then find what is happened with data at receiving end.	(5,5)
Q4.	Explain the frame formats of IEEE 802.3 and 802.4 Standard in detail.	(5)
a)		
b)	Identify the five major components of data communication system.	(5)
Part B		
Q5.	Explain the working of Leaky Bucket and Token Bucket . Also discuss their advantages and disadvantages.	(7)
a)	Define the principle of Optimality with suitable example.	(3)
b)		
Q6.	Discuss the working of 3-way hand shake when establishing a connection in Transport layer .	(5)
a)	Explain TCP and UDP Headers.	(5)
b)		
Q7.	Write Short notes on following: i) SNMP ii) E-mail	(5,5)