

University of Mumbai
Examinations Summer 2022

Time: 2 hour 30 minutes

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1]	_____ modulation is used to send bits over guided and unguided media as analog signal.
A	Digital
B	Amplitude
C	Frequency
D	Phase
2]	Network layer is responsible for delivery of packet from
A	Port to port
B	Network to Network
C	Source to Destination
D	Process to Process
3]	Flow control in Data link layer is determined by
A	Sender
B	Receiver
C	Network
D	Switch
4]	Which protocol let users transmit whenever they have data to be sent and if there will be collisions the colliding frames will be damaged?
A	Pure ALOHA
B	CSMA
C	CSMA/CD
D	CSMA/CA
5]	Time to Live(TTL)field in the IP datagram header is used to
A	Prioritize packet
B	Optimize Routing
C	Reduce Delays
D	Avoid Looping of packet
6]	How many bytes represent the network id in class B address
A	2
B	1
C	3
D	4
7]	In a three-way handshake when the server program tells its TCP that it is ready to accept a connection, this request is called the following.
A	active open
B	passive open
C	client request
D	server reply
8]	The primary function of DNS is to map _____ onto resource Record
A	MAC Address
B	Public key
C	Domain Name
D	IP Address
9]	IP assigned for a client by DHCP server is

A	fixed for 5 hrs
B	for a limited period
C	for an unlimited period
D	not time dependent
10]	Assigning a global IP address to every outgoing packet is called as
A	Supernetting
B	Network Address Translation
C	IPv4
D	Subnetting

Q2,	
A	Solve any Two 5 marks each
i.	What are different hardware component used to design computer network?
ii.	What are the advantages and disadvantages of star topology?
iii.	What are the benefits of fiber optics over coaxial cable?
B	Solve any One 10 marks each
i.	Describe ISO-OSI model with design issues.
ii.	Why framing is used at DLL? Also explain its different types.

Q3	
A	Solve any Two 5 marks each
i.	What is persistence strategy used at DLL to avoid collision?
ii.	Describe classfull and classless addressing strategy.
iii.	Describe supernetting at Network layer.
B	Solve any One 10 marks each
i.	How the concept of sliding window is used in Go Back N ARQ protocol?
ii.	Describe IP header format.

Q4	
A	Solve any Two 5 marks each
i.	Explain different techniques used to improve Quality of service.
ii.	What is three ways handshaking technique used in transport layer?
iii.	What is the use DNS?
B	Solve any One 10 marks each
i.	Describe TCP segment header.
ii.	Explain DHCP protocol in detail.