Total No. of Questions : 08]

SEAT No. :

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[4958]-1087
T.E.(Computer Engineering)
COMPUTER NETOWRKS
(2012 Course) (Semester-II) (End Semester)

Time :2½Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Figures to the right indicate full marks.***
2) ***Draw neat diagrams wherever necessary.***
3) ***Assume suitable data if necessary.***

Q1) a) What is FTP? What are the three FTP transmission modes? **[4]**

b) Explain UDP Header? The following is a dump of a UDP header in hexadecimal format. 06 32 00 0D 00 1C E2 17 **[8]**

i) What is source port number?

ii) What is destination port number?

iii) What is the total length of the user datagram?

iv) What is the length of the data?

v) Is the packet directed from a client to a server or vice versa?

vi) What is the client process?

c) What is fragmentation in IPv4, Explain with example? An IPv4 datagram arrives with fragmentation offset of 0 and an Mbit(More fragment bit) of 0, Is this a first fragment, middle fragment or last fragment? **[4]**

d) What is the difference between open-loop congestion control and closed-loop conjestion control? Name the policies that can prevent congestion? **[4]**

OR

Q2) a) Suppose a router has built up the routing table shown below. The router can deliver packets directly over interfaces 0 and 1, or it can forward packets to routers R2, R3 or R4. Describe what the router does with a packet addressed to each of the following destinations. **[8]**

i) 128.96.39.10

ii) 128.96.40.12

iii) 128.96.40.151

iv) 192.4.153.17

v) 192.4.153.90

P.T.O.

SubnetNumber	SubnetMask	NextHop
128.96.39.0	255.255.255.128	Interface 0
128.96.39.128	255.255.255.128	Interface 1
128.96.40.0	255.255.255.128	R2
192.4.153.0	255.255.255.192	R3
(Default)		R4

Routing table

b) What are four general techniques to improve quality of service? Explain any one in detail? **[6]**

c) Describe following commands with syntax: **[6]**

i) Ping

ii) Traceroute

iii) Telnet

Q3) a) Explain 802.11 Wireless frame format in detail? **[6]**

b) Write short note on wireless Application Protocols. **[6]**

c) What is the purpose of NAV? Explain **[4]**

OR

Q4) a) Explain in detail MAC Sublayer DCF(Distributed Coordination Function) used in wireless LAN. **[6]**

b) Explain WLAN architecture **[6]**

c) Explain bluetooth frame format. **[4]**

Q5) a) What is VoIP? Explain SIP(Session Initiation protocol) in detail **[8]**

b) Explain VANET architecture? What are the challenges in Vehicular Network? **[8]**

OR

Q6) a) What is DTN? Explain different layers of DTN? **[8]**

b) Explain H.323 protocol used in VoIP? **[6]**

c) What are applications of VoIP? **[2]**

Q7) a) What is virtualization? Explain. **[6]**

b) Explain ATM architecture? **[6]**

c) Write short note on GMPLS. **[6]**

OR

Q8) a) Explain ATM Header? Explain Application Adaption Layer in detail. **[8]**

b) What are components of Optical Network. **[6]**

c) Explain SONET frame structure? **[4]**