

Total No. of Questions : 08]

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[4958]-1087

SEAT No. :
[Total No. of Pages : 3

T.E.(Computer Engineering)

COMPUTER NETWORKS

(2012 Course) (Semester-II) (End Semester)

Time : 2½Hours]

Instructions to the candidates:

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

[Max. Marks : 70

- 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 congestion 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.

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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]

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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]

