

Total No. of Questions : 08]

SEAT No. :

**P2894**

**[4958]-1087**

[Total No. of Pages : 3

**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 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.*

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]
- Ping
  - Traceroute
  - 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]



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