

Total No. of Questions : 8]

SEAT No. :

P4138

[4860]-344

[Total No. of Pages : 2

**M.E. (Computer Engineering)
NETWORK PROGRAMMING
(2008 Pattern) (Elective - III (c))**

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Answer any three questions from each section.*
- 2) Answers to the two sections should be written in separate books.*
- 3) Neat diagrams must be drawn wherever necessary.*
- 4) Figures to the right indicate full marks.*
- 5) Assume suitable data, if necessary.*

SECTION - I

- Q1)** a) Explain TCP connection establishment and termination process with neat labeled diagram. [8]
b) Buffer size limits the size of input datagram. How? Justify. [8]
- Q2)** a) Describe address conversion functions with an example program. [8]
b) Explain crashing and rebooting of server host. [8]
- Q3)** a) Describe DNS-typical arrangement of clients, resolvers and name servers. [8]
b) Write a program for UDP echo client-server. [8]
- Q4)** Write short notes on (ANY THREE) : [18]
a) Routing sockets
b) Significance of port numbers and allocation
c) TIME-WAIT state in TCP
d) Data-link socket address structure

P.T.O.

SECTION - II

- Q5)** a) Explain different types of addressing used in computer network with suitable examples. List the protocols that use these addresses. [8]
b) Write neat labeled diagram explain IPv4 and IPv6 headers. [8]
- Q6)** a) Explain SNTP protocol in detail. [8]
b) Write a program for TCP based echo server using threads. [8]
- Q7)** a) Compare and explain TCP iterative and concurrent server in detail. [8]
b) Explain multicasting on a WAN. [8]
- Q8)** Write short notes on (ANY THREE) : [18]
a) TCP pre-forked server
b) IPv6 multicast address
c) Race conditions and shared data access
d) IPv6 address testing macros

