ANNA UNIVERSITY, COLLEGE OF ENGINEERING

B.Tech degree Examinations , APR 2009

SIXTH SEMESTER

IT382-NETWORK PROGRAMMING AND MANAGEMENT

Time: 3Hrs **Max.Marks: 100**

Answer all questions
PART A (10 x 2 = 20 Marks)

1. Specify IPv4 Socket address structure.
2. How the maximum window advertised by TCP is extended beyond its maximum allowed value for high-speed connections?
3. Write a program to find the machine's byte order.
4. What is I/O Multiplexing?
5. State the purpose of TCP_NODELAY Socket options.
6. Draw the flow diagram for close () with SO_LINGER option set and shutdown ().
7. What is the functionality of IPV6_ADDRFROM? List down the constraints under which this option performs.
8. What is the need for RAW Socket?
9. What is the role of Proxy agent in Network Management Model?
10. State the major enhancement incorporated in SNMPv3 over SNMPv2.

PART B (5 x 16 = 80 Marks)

11. i) Explain the MIB structure of SNMP in detail. (8)
    ii) Compare SNMPv1 and SNMPv2 in terms of their functionality and PDU formats. (4+4)

12. a) i) Explain in detail about the various I/O models in Unix. (12)
ii). State the necessity for Byte ordering functions in socket programming. (4)

Or

b) i. Write notes on POSIX Signal handling. (10)
ii. Write notes on Socket Address Structures (6)

13. a) Explain DNS in detail with the Resource record contents. Specify the syntax of gethostbyname() and the structure hostent. (16)

Or

b) Write a Connection oriented Concurrent server program, which uses TCP and show the status of Client and Server before call to fork, after fork and after socket closing by parent and child. (16)

14. a) Explain the various IP Socket options in detail. (16)

Or

b) Explain the various UDP server side System Calls and getsocket , setsocket functions in detail. (16)

15. a) Write notes on

i. Raw Socket input and output. (6)
ii. IPV4 client communicating with IPV6 server (10)

Or

b) Write a program that uses threads and raw sockets for checking the connectivity of a remote machine. (16)