R07

IV B.Tech I Semester Supplementary Examinations, February/March, 2012 NETWORK PROGRAMMING

(Common to Computer Science & Engineering and Information Technology)

Time: 3 hours

Code No. N0521

Max. Marks: 80

Set No.1

Answer any FIVE Questions All Questions carry equal marks *****

- 1. a) Distinguish between UDP & TCP protocol.
 - b) What are the limitations on the size of the IP datagram? How they affect the data transmitted by an application.
- 2. Write the syntax and explain each of the following socket functions.

a) Listen	b) Close and related
c) Connect	d) Bind

- 3. a) Explain about terminate and signal handling server process termination.b) Discus about TCP Echo server functions.
- a) Explain about IPV6 Socket option and TCP socket options.b) Make a comparison of the five different I/O models.
- 5. a) Explain about Lack of flow control with UDP.b) Describe the important functions of UDP echo server.
- 6. a) Explain the use of uname function with an example?b) Discuss the use of gethostbyname function with an example?
- 7. a) Explain about File and Record Locking?b) Explain how semaphores are used to synchronize the access to the shared memory segments?
- 8. Discuss about terminal modes and control terminals?

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Set No.2

Answer any FIVE Questions All Questions carry equal marks *****

- 1. a) With the help of a neat sketch explain the steps and buffers involved when an application writes to a TCP socket.
 - b) Summarize the protocol usage of any 4 common Internet applications.
- 2. a) Explain byte ordering and byte manipulating functions.b) Explain about and exec function and close function and related function
- 3. a) Explain about normal startup and termination between client and server.b) Explain the procedure steps for crashing, rebooting and shutdown of server hosts.
- a) What socket options are processed by IPv6 with a level of IPPROTO_IPv6? Explain.
 - b) Explain protocol independent socket options.
- 5. Explain the UDP client-server application for echoing the text given by the user.
- 6. a) Describe geteservbyname and getservbyport fuctions with example.b) Explain about Resolver options.
- 7. a) What are the advantages of FIFO's over pipes? Explain stream and messages with example.
 - b) Discuss the importance of message queue? Explain different functions.
- 8. a) Explain about RPC transparency issues.b) Briefly explain on Pseudo-Terminals.

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Set No.3

Answer any FIVE Questions All Questions carry equal marks *****

- 1. a) Draw the OSI seven layered model along with the approximate mapping to the internet protocol suite. Explain the functions offered by each layer?
 - b) Explain how TCP connection is established using Three-way handshake protocol?
- 2. a) Discuss IPv4 socket address structure and the significance of each field?b) Explain byte ordering and byte manipulating functions?
- 3. a) Explain the procedure steps for rebooting and shutdown of server hosts.b) Discuss about signal handling server process termination?
- 4. Write short note on
 - a) Batch inputc) Shutdown function

b) select functiond) poll function

- 5. Write a program for UDP Echo Server and Echo client and Explain?
- 6. Explain the following functionsa) gethostbynameb) uname
- 7. a) What is semaphore ? Explain how locking can be achieved with semaphores?
 - b) What is pipe? How are Pipes are different from FIFO's?
- 8. a) Briefly discuss overview of rlogin with an Example?b) Explain about Terminal line disciplines?

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Set No.4

Answer any FIVE Questions All Questions carry equal marks *****

- 1. a) What are the limitations on the size of the IP datagram? How they affect the data transmitted by an application.
 - b) Summarize the protocol usage of any 4 common Internet applications.
- 2. Write the syntax and explain each of the following socket functions.

a) Accept	b) Close and related
c) Connect	d) Bind

- 3. a) Discus about TCP Echo server functionsb) Explain the procedure steps for crashing and shutdown of server hosts.
- 4. a) Explain protocol independent socket optionsb) Explain about IPV6 Socket option and TCP socket options
- 5. a) Determine outgoing interface with UDP?b) Explain about Lack of flow control with UDP.
- 6. a) Explain about Resolver optionsb) Explain the use of uname function with an example
- 7. a) Explain about File and Record Locking? Write a program to lock a file using advisory locking.
 - b) Discuss about FIFO's and Pipes? Give an example
- 8. a) Briefly discuss overview of rlogin with an Example?b) Discuss about control terminals?

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