CS-69

BACHELOR OF COMPUTER APPLICATIONS (PRE - REVISED)

Term-End Examination

December, 2013

CS-69 : TCP/IP PROGRAMMING

Time : 2 hours   *Maximum Marks : 60*

Note :   *Question No.1 is compulsory. Answer any three from the rest.*

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1   (a)   How are net id and nost id distributed in class A, B and C ?   **3**

(b)   Given the network address 132.21.0.0. Find the class, the block and the range of the addresses.   **3**

(c)   What is the advantages of subnetting ? Illustrate through an example.   **6**

(d)   Suppose a host or a router needs to find the physical address of another host or a router. Write all steps performed by the ARP.   **4**

(e)   How does TCP manage corrupted segments and lost acknowledgements? Explain through an illustration.   **5**

(f)   Write a client and a server programs in C-language to establish a TCP connection between a client and a server. Once a connection is established the client program sends a string to the server. The server program counts the length of the string and sends the reply to the client program.   **9**

2. Differentiate between the followings :   **10**
    (a) Unicasting, Broadcasting and Multicasting.
    (b) Recursive solution and Iterative solution.
    (c) Authentication and Authorization.
    (d) Stream socket and datagram socket.

3. (a) What are the different commands used to   **5**
         copy files between FTP clients and FTP
         servers ? Also, write the syntax and use of
         any of these commonds.
    (b) Write the syntax and meaning of two   **5**
         functions, one which converts data from the
         host format to the network format and the
         second from the network format to the data
         format respectively.

4. Explain the purpose and importance of the   **10**
    following IP/TCP header field,
    (a) Window size
    (b) Urgent pointer
    (c) Fragment offset
    (d) TTL
    (e) Header length

5. Write the syntax and purpose of the following   **10**
    system calls and unix commands.
    (a) socket ( )
    (b) bind ( )
    (c) chmod
    (d) du
    (e) sleep