03557

BACHELOR OF COMPUTER APPLICATIONS

Term-End Examination

December, 2013

BCS-061 : TCP / IP PROGRAMMING

Time : 2 hours   *Maximum Marks : 60*

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

1. (a)   Consider the given network address   2
          132.21.0.0. Find its class and the range of
          class.

    (b)   Differentiate between Subnetting and   3
          Supernetting.

    (c)   Discuss   different   security   levels   4
          implemented in SNMP.

    (d)   Explain the link state Routing algorithm.   6
          Explain its process of finding the optimal
          path.

    (e)   Write a program in C language for TCP echo   8
          client and server.

    (f)   Explain the purpose of listen system call.   3
          Write its syntax.

    (g)   Show by calculation, how many hosts per   4
          network each IP address class (B and C
          only) can have with an example of each.

2.   Differentiate between the followings :   10
     (a)   ARP and RARP
     (b)   read ( ) and write ( ) system call
     (c)   ntohl ( ) and ntohs ( )
     (d)   Broadcasting and multicasting

3. (a) Draw UDP packet format. Describe purpose 5
of each field of the UDP header.
(b) Explain TCP Connection Termination 5
process using a diagram.

4. (a) Why is IP called a best-effort delivery 4
protocal? Justify your answer.
(b) Explain the process of flow control in TCP 6
using sliding windows protocol.

5. (a) Define the following : 5
(i) Structure of socket address
(ii) Byte Ordering
(b) Differenciate between 'Domain Name 5
System' and ''Dynamic Domain Name
System'. Also, explain the purpose of
following DNS utilities :
(i) Host
(ii) Nslookup
(iii) Hig