BACHELOR OF COMPUTER APPLICATIONS (BCA) (Revised)
Term-End Examination
June, 2016

01256

BCS-061 : TCP/IP PROGRAMMING

Time : 2 hours *Maximum Marks : 60*

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

1. (a) Write the advantages of TCP/IP model in comparison to OSI model. Also, write down the functions performed by the transport layer of TCP/IP model. 7

   (b) What is the purpose of DNS ? Why is it necessary ? 5

   (c) Routing Information Protocol (RIP) implements distance vector routing. Explain how routing tables are created and updated with it. 7

   (d) Explain the meaning and purpose of IP address 0.0.0.0. 3

(e)   Assume a subnet mask 255.255.240.0 is assigned to an address of Class B. How many hosts are possible per subnet and how many subnets are possible ?   *4*

(f)   List and explain the fields which are similar between TCP and UDP header.   *4*

2. (a)   What is the importance of ICMP at network layer ? Explain the reports generated by ICMP.   *5*

(b)   Explain the functioning of ARP. Also, compare it with RARP.   *5*

3. (a)   Draw and explain the UDP client-server communication architecture with sequence of socket system calls.   *5*

(b)   How do a client and server communicate over connection oriented service ? Compare it with connectionless services.   *5*

4. (a)   Why does the server computer work with high speed, large memory and large disk space ? Explain.   *4*

(b)   What is a socket ? Differentiate between active and passive sockets. Also, explain the fields in the structure of socket.   *6*

5. Write short notes on the following :   *5×2=10*

    (a)   SMTP

    (b)   RAW Sockets

    (c)   Sliding Window Protocol

    (d)   Bind System Call

    (e)   IMAP

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