BCS-052

BACHELOR OF COMPUTER APPLICATIONS (BCA) (Revised)

03741 Term-End Examination

June, 2017

BCS-052 : NETWORK PROGRAMMING AND ADMINISTRATION

Time : 3 hours   *Maximum Marks : 100*

Note : Question number 1 is **compulsory**. Answer any **three** questions from the rest.

1. (a) Why and how is broadcasting used in Address Resolution Protocol ? Explain.   5

    (b) Explain the differences between UDP data transfer and TCP data transfer.   6

    (c) Why is Sliding Window Protocol used in transport layer ? Explain its working using an example when window size is of 5 bits only.   8

    (d) What is HTTP ? Explain the methods used by HTTP for data transfer.   5

    (e) Discuss the FTP connection mechanism between FTP Client and FTP Server.   5

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(f) Explain, why lost acknowledgement does not necessarily force the retransmission of TCP segment. *5*

(g) Which command is used to display real-time running tasks in Linux ? Explain the significance of identified command using an example. *6*

2. (a) What are the different remote administration tools ? Explain two features of each. *10*

(b) Draw and explain the tree-way handshaking used by TCP for connection establishment and connection termination. *10*

3. (a) Explain the purpose and importance of the following header fields of TCP and IP : *10*

(i) Type of Service

(ii) Protocol

(iii) Header Checksum

(iv) Sequence Number

(b) Explain the concept of IP subnetting and supernetting with an example for each. *5*

(c) Differentiate between SMTP and IMAP. *5*

4. Write an algorithm for a UDP client and a UDP server for each of the following specifications :

- UDP client will initiate the communication and send the "Name of machine" to the server. *10*

- The server has a list of machine names and their corresponding passwords. After receiving the name, the sever will return back the corresponding password. *10*

5. Write short notes on the following : *4×5=20*

(a) DNS

(b) Network File System (NFS)

(c) Byte Ordering

(d) Distance Vector Routing

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