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BCS-052

BACHELOR OF COMPUTER APPLICATION (BCA) (REVISED)

Term-End Examination

June, 2020

BCS-052 : NETWORK PROGRAMMING AND ADMINISTRATION

Time : 3 Hours *Maximum Marks : 100*

Weightage : 75%

***Note** : (i) Question No. 1 is compulsory.*

*(ii) Answer any **three** questions from the rest.*

1. (a) How is flow control managed in TCP ? Explain the sliding window protocol using an example. 10

(b) Explain the purpose of the following fields of TCP and IP : 10

(i) Urgent Pointer

P.T.O.

(ii) Window Size

(iii) Sequence Number

(iv) Fragment Offset

(c) Define a socket. Write its structure. List and explain *five* different types of socket options available. 10

(d) List and discuss at least *five* commands being used in LINUX for problem diagnosis and troubleshooting. 10

2. (a) What is remote administration ? Why is it required ? Identify and narrate some of the tasks/services for which remote administration is needed. 10

(b) With the help of a neat diagram, explain the UDP architecture. 10

3. (a) In a client/server architecture, explain the characteristics of a server program and also differentiate between sequential and concurrent server programs. 10

(b) Define an Internet Control Message Protocol (ICMP). Mention whether it is connected or connectionless environment. List and explain any *four* commonly employed ICMP message types. 10

4. (a) What is a DNS server ? List and explain any *two* types of DNS servers. Write the step-by-step procedure to illustrate the recursive solution for a DNS server. 10

(b) Explain Network File System (NFS) briefly. Further, with reference to NFS, write short notes on the following : 10

(i) Caching

(ii) NFS Background mounting

(iii) NFS Daemons

5. Write short notes on any ***four*** of the following : 5 each

(a) Roles and responsibilities of a Network Administrator

(b) LINUX kernel management

(c) Disk security management

(d) Socket descriptor

(e) Simple Network Management Protocol (SNMP)

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