Professional Course Examination, May 2019

(6th Semester)

BACHELOR OF COMPUTER APPLICATIONS

Paper : BCA–6E3

(Fundamentals of TCP/IP)

Full Marks : 75

Time : 3 hours

(PART : A—OBJECTIVE)

(*Marks* : 25)

The figures in the margin indicate full marks for the questions

SECTION—A

(*Marks* : 15)

Tick (✓) the correct answer in the brackets provided :   1×10=10

1. Which of the following is not associated with TCP/IP?

(a) Good failure recovery   (   )   *(b)* Gross platform   (   )

(c) Low data overhead   (   )   *(d)* Platform dependent   (   )

2. SMTP operates on TCP port and RFC respectively

(a) 25 and 521   (   )   *(b)* 80 and 2616   (   )

(c) 23 and 854   (   )   *(d)* 79 and 1288   (   )

3. A direct broadcast address for the network number 135.74 is

(a) 135.74.255.0   (   )   *(b)* 135.74.255.255   (   )

(c) 135.74.0.0   (   )   *(d)* 135.74.0.255   (   )

4. A DNS client is called

(a) DNS updater   ( )   *(b)* static DNS   ( )

(c) DNS resolver   ( )   *(d)* DNS handler   ( )

5. In the IPv6 header, the traffic class field is similar to which field in the IPv4?

(a) TOS field   ( )   *(b)* Fragmentation   ( )

(c) Fast switching   ( )   *(d)* Option field   ( )

6. IPv6 does not use ____ type of address.

(a) multicast   ( )   *(b)* broadcast   ( )

(c) Any cast   ( )   *(d)* All of the above   ( )

7. Which of the following is not one of the routers exist within an OSPF network?

(a) Internal router   ( )   *(b)* Area broadcast router   ( )

(c) External router   ( )   *(d)* Backbone router   ( )

8. To build the routing table, ____ method use pre-programmed definition representing paths through the network.

(a) hybrid routing   ( )   *(b)* automatic routing   ( )

(c) dynamic routing   ( )   *(d)* static routing   ( )

9. Telnet cannot separate in ____ mode.

(a) full-duplex   ( )   *(b)* half-duplex   ( )

(c) line mode   ( )   *(d)* character-at-a-time   ( )

10. Which of the following characters is not to limit who is searches?

(a) !   ( )   *(b)* ?   ( )

(c)   ( )   *(d)* .   ( )

State whether the following statements are *True (T)* or *False (F)* by putting a Tick (✓) mark in the brackets provided :   1×5=5

1. RFCs are the primary method for commenting new ideas on products, researches and standard.

(T / F)

2. An IP address with a host id value of 0 indicates the network itself.

(T / F)

3. Internal timestamp option is not used to record the timestamps at which the IP datagram is received at each node.

(T / F)

4. A RIP node validates a router by setting its metric to 16 the RIP equivalent of infinity.

(T / F)

5. Who is ++ allow single queries to any number of decentralized who is database.

(T / F)

SECTION—B

(*Marks* : 10)

Answer the following questions :   2×5=10

1. What are the three promising initiatives that are underway to improve Internet Technology?

2. What is Internet Top-level Domain?

3. Briefly explain any two features of TCP/IP.

4. What is Count-to-Infinity problem?

5. Write the steps of a finger Client/Server session in TCP/IP.

(**PART : B—DESCRIPTIVE**)

(*Marks* : 50)

The figures in the margin indicate full marks for the questions

1. *(a)* Explain the OSI reference model with diagram.   6
   (b) Write short notes on NFS and SNMP.   4

OR

   (c) Differentiate between Intranet and Extranet.   4
   (d) What are the benefits and applications of Intranet?   6

2. *(a)* What are the different classes of IPv4 address format?   5

(b) Explain classless inter-domain routing.   5

OR

(c) Write the steps performed by the ARP model at the receiving windows.   5

(d) Explain RAAP operation with appropriate diagram.   5

3. *(a)* Explain the structures of IPv4 header.   7

(b) What is strict and loose server routing?   3

OR

(c) Explain the structure of UDP header.   7

(d) Differentiate between TCP and UDP.   3

4. *(a)* Explain Distance Vector Routing and mention the advantages and disadvantages.   4+3=7

(b) What are the prime functions of Gateway, Bridge and Router?   3

OR

(c) What is routing? Explain intra-area routing and inter-area routing.   5

(d) What are the contents of routing table? Mention the disadvantages of RIP.   3+2=5

5. *(a)* Explain how files are transfer by using File Transfer Protocol (FTP).   6

(b) Differentiate among TFTP, FTP and anonymous FTP.   4

OR

(c) Explain the Telnet protocol. What are the two applications of using Telnet?   2+3=5

(d) Explain any three methods to secure by using R commands.   5

★ ★ ★