Reg. No. ☐☐☐☐☐☐

BCACAC 262

IV Semester B.C.A. Degree Examination, April/May 2019

(Credit Based Semester Scheme)

(Common to All Batches)

Principles of TCP/IP

Time : 3 Hours]

[Max. Marks : 80

Instructions : *Answer any ten questions from Part – A and any one full question from each Unit of Part – B.*

PART – A

1. Answer **any ten** of the following : (10 × 2 = 20)

    (a) Expand IETF and ARPANET.

    (b) What is the use of routers in internet architecture?

    (c) What is loopback address? Why is it used?

    (d) What is a routing table?

    (e) What is meant by subnet mask?

    (f) What are the functions of HELLO protocol?

    (g) What is the use of rlogin protocol?

    (h) What do you mean by reliable stream delivery?

    (i) What do you mean by passive and active open in TCP?

    (j) What is the purpose of Post Office Protocol?

    (k) What is the purpose of MIME protocol?

    (l) What is Internet Domain Name System? Give example.

PART – B

UNIT – I

2. (a) What is IAB? Explain the organization of IAB.

    (b) Explain the TCP/IP reference model.

    (c) Explain how RARP works.

    (5 + 5 + 5)

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3. (a) Explain various classes of IP addressing scheme.

(b) Explain address resolution through direct mapping.

(c) Explain Directed and limited broadcast. **(5 + 5 + 5)**

UNIT – II

4. (a) Write the IP datagram format and explain the fields VERS, HLEN, TOTAL LENGTH of datagram.

(b) Explain various characteristics of BGP.

(c) What is next-hop routing? Explain with an example. **(5 + 5 + 5)**

5. (a) What is RIP? Explain the working of RIP.

(b) Explain the IP routing algorithm.

(c) Write a short note on Open shortest Path First Protocols. **(5 + 5 + 5)**

UNIT – III

6. (a) Explain the sliding window technique with a neat diagram.

(b) Explain how application programs are used to implement telnet client & telnet server with a diagram.

(c) Write UDP message format and explain the various fields. **(5 + 5 + 5)**

7. (a) Explain how TCP establishes connection using 3-way hand shake.

(b) What are the advantages and disadvantages of delayed acknowledgement scheme?

(c) What is the use of IGMP in multicasting? Explain its phases. **(5 + 5 + 5)**

UNIT – IV

8. (a) Explain FTP process model with diagram.

(b) Give the format of IPv6 base header. Explain its fields.

(c) Write a note on Simple Mail Transfer Protocol. **(5 + 5 + 5)**

9. (a) Write a note on Multipurpose Internet Mail Extensions protocol.

(b) Write a note on TFTP.

(c) Explain any five features of IPv6. **(5 + 5 + 5)**

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