322674(22)

B. E. (Sixth Semester) Examination, April-May 2021

(New Scheme)

(CSE Engg. Branch)

INTER-NETWORKING with TCP/IP

(Professional Elective-I)

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : All questions are compulsory. Part (a) of each question is compulsory. Attempt any two parts from (b), (c) and (d). The figures in the right-hand margin indicates marks.

Unit-I

1. (a) What do you mean by Bandwidth?   2

(b) What do you mean by internetworking? Discuss the role of major equipments/components needed for establishing internetworking in different network segments/subnets.   7

(c) Explain circuit-switching and packet switching? What advantages does a circuit switched network have over a packet-switched network?   7

(d) How the numbers of cross-points reduced in the multistage swtitch having 03 stages, show with example? And explain different types of switches.   7

Unit-II

2. (a) How does the switch decide which output port to place each packet on?   2

(b) Why subnetting is needed? How it improves the performance of N/W? Explain by drawing suitable block diagram.   7

(c) You need to configure a server that is on the subnet 192.168.19.24/29. The router has the first available host address. Which of the following should you assign to the server? Justify your answer.

(i) 192.168.19.0 255.255.255.0

(ii) 192.168.19.33 255.255.255.240

(iii) 192.168.19.26 255.255.255.248

(iv) 192.168.19.31 255.255.255.248   7

(d) Explain ARP and RARP for dynamic mapping of logial address with physical address.   7

Unit-III

3. (a) What is Intra domain and Inter domain routing?   2

(b) What do you mean by source-based tree multi-casting protocol? Write a technical note on MOSPF.   7

(c) Explain RIP in detail by specifying working of distance vector routing and RIP updation algorithm.   7

(d) Explain the principle of DVMRP also explain the use of cached information in DVMRP to minimize the multicast trees.   7

Unit-IV

4. (a) What do you mean by encapsulation and de-capsulation in context with TCP operation.   2

(b) Explain the various states of TCP state machine in connection establishement phase and connection teardown phase. 7

(c) Compare Karn's algorithm with Leaky bucket algorithm. 7

(d) What do you mean by Send Window, Receive Window, Shrinking of window and Silly window Syndrome in TCP? 7

Unit-V

5. (a) What are BISDN servics? 2

(b) Explain the ATM architecture by giving the details of interfaces, TP, VCI and VPI. 7

(c) How your company is connected by ISDN line to ISP? Explain by drawing suitable block diagram with indication of special equipments used. 7

(d) What do you mean by transmission paths, virtual paths and virtual circuits? 7