

USN

--	--	--	--	--	--	--	--	--	--

15EC64

Sixth Semester B.E. Degree Examination, July/August 2022
Computer Communication Networks

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. With layer diagram, explain the responsibility of each layer in OSI model. (10 Marks)
b. What different types of framing? Explain with a neat diagram the performance of a simplest protocol. (06 Marks)

OR

- 2 a. Discuss the performance of stop and wait ARQ protocol. (06 Marks)
b. Write short notes on Physical structures of networks. (04 Marks)
c. Compare and contrast OSI model with TCP/IP protocol suite. (06 Marks)

Module-2

- 3 a. With a flow diagram explain CSMA/CA protocol. (04 Marks)
b. Explain IEEE802.3 MAC frame format. (06 Marks)
c. List the goals of fast Ethernet. Enumerate fast Ethernet implementation. (06 Marks)

OR

- 4 a. Explain any two method of controlled access of the channel. (06 Marks)
b. A pure ALOHA network transmits 200bit frames on a shared channel of 200kbps. What is the through put if the system (all stations together) produces?
i) 1000 frames per second
ii) 500 frames per second
iii) 250frames per second. (06 Marks)
c. What is the difference between unicast, multi cast and broad cast address Define the type of following destination address.

4A : 30 : 10 : 21 : 10 : 1A

47 : 20 : 1B : 21 : 08 : EE

FF : FF : FF : FF : FF : FF

(04 Marks)

Module-3

- 5 a. Explain with a neat diagram PCF implementation on top DCF in a infra structured network. (06 Marks)
b. Briefly explain IEEE 802.11 addressing mechanism. (06 Marks)
c. Explain virtual LAN system and how the membership is allocated virtual LAN systems. (04 Marks)

OR

- 6 a. With a neat diagram, explain the specific functionalities of Bluetooth layers. (06 Marks)
b. Compare and contrast :
i) Classful and Classless addressing (04 Marks)
ii) Datagram and virtual circuit approach. (06 Marks)

Module-4

- 7 a. Discuss briefly the ICMP error reporting messages and also the ICMP debugging tools. (08 Marks)
- b. Write short notes on :
i) Distance vector routing
ii) Link state routing. (08 Marks)

OR

- 8 a. Discuss briefly the three phases that the mobile host has to go through while communicating with remote host. (08 Marks)
- b. Write short notes on :
i) Open shortest path first
ii) Border gateway protocol. (08 Marks)

Module-5

- 9 a. With a neat diagram, discuss :
i) User datagram format
ii) UDP services
iii) UDP applications. (10 Marks)
- b. Discuss congestion control mechanism in TCP. (06 Marks)

OR

- 10 a. With a neat diagram, explain different fields of TCP segment. (06 Marks)
- b. Write short notes on :
i) Flow control mechanism in TCP. (06 Marks)
ii) Error control mechanism in TCP. (04 Marks)
