

Code: 19CS3403

II B.Tech - II Semester – Regular Examinations – AUGUST 2021

COMPUTER NETWORKS
(COMPUTER SCIENCE & ENGINEERING)

Duration: 3 hours

Max. Marks: 70

-
- Note: 1. This question paper contains two Parts A and B.
2. Part-A contains 5 short answer questions. Each Question carries 2 Marks.
3. Part-B contains 5 essay questions with an internal choice from each unit. Each question carries 12 marks.
4. All parts of Question paper must be answered in one place
-

PART – A

1. a) Define Error detection and correction.
b) What are routers?
c) What are the responsibilities of Network Layer?
d) What is Piggybacking? How it is used in transport layer?
e) What is anonymous FTP?

PART – B

UNIT – I

2. a) Explain the types of Physical address in data link layer. 6 M
b) How ARP is used to get Physical address from Logical address? Explain in detail. 6 M

OR

3. a) Calculate the CRC for the following data:
Code Word: 1011011 Divisor: 101101
Show the transmitted message. 6 M
- b) What is ALOHA? Write various types of ALOHA. 6 M

UNIT – II

4. a) What approach does DHCP and NAT use to solve the
problem of address depletion in IPv4? 6 M
- b) What are the various factors that affect the performance
of network? How can we compute them? 6 M

OR

5. a) Explain various services of network layer. 6 M
- b) Compare the datagram and virtual-circuit subnets. 6 M

UNIT-III

6. a) Mention the limitations of Distance Vector and Link-
State routing algorithms. 6 M
- b) Explain about Internet Control Message Protocol
version 4. 6 M

OR

7. a) Explain the concept of fragmentation in IPv4. 6 M
- b) What is IPv6? Explain the structure of IPv6 Datagram. 6 M

UNIT – IV

8. a) Explain the segment header format of TCP with an example. 6 M
- b) What is addressing? Explain addressing concept in transport layer. 6 M

OR

9. a) Explain various services of Transport Layer. 6 M
- b) Explain the 3-way Handshake connection mechanism in TCP. 6 M

UNIT – V

10. a) Explain the concept of FTP in detail. 6 M
- b) What role does the DNS resolver play in the DNS system? What are the various resolution mechanisms? 6 M

OR

11. a) Write short notes on e-mail services of the application layer. 6 M
- b) Explain the components and applications of SSH. 6 M