

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-IV (NEW) EXAMINATION – SUMMER 2022**

**Subject Code:3143201****Date:27-06-2022****Subject Name:Data Communication & Computer Networks****Time:10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

	<b>MARKS</b>
<b>Q.1</b> (a) List out and explain in brief various types of transmission impairments.	<b>03</b>
(b) Explain OSI Model with each Layer in Detail.	<b>04</b>
(c) Explain CRC with example.	<b>07</b>
<b>Q.2</b> (a) Differentiate circuit switching and packet switching.	<b>03</b>
(b) Explain GO Back N & Selective Repeat Protocol.	<b>04</b>
(c) Explain the TCP Segment structure and justify the importance of its field values.	<b>07</b>
<b>OR</b>	
(c) Explain distance vector routing and Link State routing with example	<b>07</b>
<b>Q.3</b> (a) Explain Classful IP Addressing scheme for IPV4.	<b>03</b>
(b) Explain ASK, FSK and PSK for digital to analog conversion	<b>04</b>
(c) Write note on: Internet Control Message Protocol (ICMP)	<b>07</b>
<b>OR</b>	
<b>Q.3</b> (a) Compare UDP and TCP.	<b>03</b>
(b) Differentiate between Connection Oriented Services and Connection Less Services.	<b>04</b>
(c) Explain STOP and Wait and Sliding Window Protocol.	<b>07</b>
<b>Q.4</b> (a) Write a short note on DNS.	<b>03</b>
(b) Explain ALOHA in detail.	<b>04</b>
(c) Explain FDDI and Token bus in detail.	<b>07</b>
<b>OR</b>	
<b>Q.4</b> (a) Discuss File Transfer Protocol in detail.	<b>03</b>
(b) Explain CSMA/CD and CSMA/CA in detail.	<b>04</b>
(c) Explain ATM architecture in detail.	<b>07</b>
<b>Q.5</b> (a) Write a short note on Digital Signature.	<b>03</b>
(b) Write a short note on SNMP.	<b>04</b>
(c) Explain the Working of Electronic Mail Protocols in detail.	<b>07</b>
<b>OR</b>	
<b>Q.5</b> (a) Write a short note on Firewall.	<b>03</b>
(b) Write a short note on HTTP.	<b>04</b>
(c) Explain RSA algorithm with an example.	<b>07</b>

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