

GUJARAT TECHNOLOGICAL UNIVERSITY**MCA - SEMESTER– V EXAMINATION – WINTER 2019****Subject Code: 2650010****Date: 19/11/2019****Subject Name: Advanced Networking****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.

- Q.1 (a)** Answer the following questions. **07**
1. Which class of IP address is reserved for future use?
 2. What is loopback address?
 3. What is the use of PLEN in ARP message?
 4. Give the benefit of Time To Live (TTL) header field.
 5. Which protocol is used in ping command?
 6. What is mean by DHCP leases?
 7. List out the uses of OpenFlow.
- (b)** i) What is CIDR? Which IPv4 CIDR blocks are reserved for private network? **04**
 ii) Draw the diagram for ARP message format. **03**
- Q.2 (a)** Briefly discuss IPv4 datagram format in detail. **07**
(b) Differentiate the IPv4 with IPv6 datagram fragmentation. **07**
- OR**
- (b)** Discuss the Next-Hop Forwarding in detail? **07**
- Q.3 (a)** What is route change request from routers? Explain the ICMPv6 redirect message format in detail. **07**
(b) How UDP different from TCP? Discuss the UDP message format. **07**
- OR**
- Q.3 (a)** Why TCP gives reliability? Explain all important functionality of TCP in detail. **07**
(b) What are the DHCP acquisition states? Explain with diagram. **07**
- Q.4 (a)** Discuss TCP segment format in detail. **07**
(b) How SMTP works for sending Non-ASCII data? Explain in detail. **07**
- OR**
- Q.4 (a)** Discuss Simple Network Management Protocol along with its format. **07**
(b) What is Jitter? How voice and video signals transmit using RTP? **07**
- Q.5 (a)** Explain the Software Defined Networking (SDN) architecture. **07**
(b) What is firewall? How packet filters firewall works? **07**
- OR**
- Q.5 (a)** How the Random Early Detection helps in congestion control. **07**
(b) Discuss the ZigBee IPv6 protocol stack in detail. **07**
