

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

# GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER-V- EXAMINATION – WINTER 2018

Subject Code: 2650010

Date: 28/11/2018

Subject Name: Advanced Networking

Time: 10.30 am to 1.00 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) (1) List the range of private IP addresses for class A, B & C. **07**  
(2) What is the use of SACK in communication?  
(3) How Authorization differs from Authentication?  
(4) Define the term RTT.  
(5) What do you mean by IoT and M2M?  
(6) How Active and Passive monitoring different from each other?  
(7) What is LPM?
- (b) (1) Differentiate connectionless vs. connection-oriented services. **03**  
(2) Discuss IPv4 Fragmentation process with proper example. **04**
- Q.2** (a) What is MTU & PMTU? Why datagrams are assembled at destination? **07**  
(b) What is ARP? Discuss the cache refinement process of ARP. **07**
- OR**
- (b) Differentiate TCP vs. UDP. Discuss workings of UDP. **07**
- Q.3** (a) Discuss TCP message format with every field in it. **07**  
(b) Why do we need NAT? 'NAT must be aware of protocols like ICMP & FTP during communication.' True/False. Justify your answer. **07**
- OR**
- Q.3** (a) Draw the state diagram of DHCP & explain lease renewal process of IP address. **07**  
(b) What is NDP? Discuss any three ICMPv6 messages. **07**
- Q.4** (a) Why do we need different types of MIME multipurpose messages? Discuss any four of them. **07**  
(b) What is MIB? Discuss the role of MIB in SNMP. **07**
- OR**
- Q.4** (a) Discuss SMTP in detail. **07**  
(b) Define WRR & DRR in context of traffic scheduling. Which method is more preferable? Justify your preference of selection. **07**
- Q.5** (a) How VPN differs from VLAN. Also discuss AH and ESP with message format. **07**  
(b) Differentiate POP3 and IMAP. **07**
- OR**
- Q.5** (a) How SA, SAP and SPI are useful in context of security. Discuss in detail. **07**  
(b) Discuss SDN and Openflow. **07**

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