

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER-V - EXAMINATION – WINTER 2018

Subject Code: 3650009

Date: 26/11/2018

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)** Write the answer in short. **07**
1. Name the components that dictate the performance of all network traffic.
 2. Which protocol is used to address the limitation of CRL mechanism?
 3. Name the types of wireless networks.
 4. Write the full form of ALPN.
 5. Why connection reuse is a critical optimization for any application running over TCP.
 6. Server-Sent events enables efficient server-to-client streaming of text based event data. State whether it is TRUE or FALSE.
 7. In Three-Way Handshaking the sequence numbers are picked randomly from both sides for security reasons. State whether it is TRUE or FALSE.
- (b)** Write the answer in brief.
1. List out and explain the components of latency. **04**
 2. Write steps through which all TCP connection begins. **03**
- Q.2 (a)** Write the answer in brief.
1. Discuss cell-breathing and near-far effect in day-to-day situations. **04**
 2. What is last mile latency? **03**
- (b)** Explain various traversal techniques used to establish end-to-end connectivity between the UDP peers on both side. **07**
- OR**
- (b)** Explain TLS handshake protocol in detail. **07**
- Q.3 (a)** Write the answer in brief.
1. How one can achieve higher bandwidth and lower latencies. **04**
 2. Name the UDP non-services and explain it briefly. **03**
- (b)** Explain Cross-Origin Resource Sharing in details. **07**
- OR**
- Q.3 (a)** Write the answer in brief.
1. What do you mean by Head-of-Line blocking in TCP? **04**
 2. What is the relevance of Certificate Revocation List during the communication? **03**
- (b)** Give details of ws and wss URL schemes for WebSocket API. **07**
- Q.4 (a)** Write the answer in brief.
1. Compare polling and long-polling latency. **04**
 2. Define term network security and sandboxing **03**
- (b)** How performance can measure and optimize in Wi-Fi? **07**
- OR**

- Q.4 (a)** Write the answer in brief.
1. Discuss protocol extensions allowed by WebSocket specification. **04**
 2. What do you mean by polling in XHR? **03**
- (b)** Which protocol is used by WebRTC to describe the parameters of the peer-to-peer connection? Explain it in detail. **07**
- Q.5 (a)** Write the answer in brief.
1. Compare TCP, UDP and SCTP. **04**
 2. Explain event stream protocol. **03**
- (b)** Draw and explain ICE agent connectivity states and transitions. **07**
- OR**
- Q.5 (a)** Write the answer in brief.
1. Write one to two sentences on SCTP concepts and terminology. **04**
 2. Draw SCTP header and data chunk format. **03**
- (b)** Differentiate SRTP and SRTCP. **07**
