

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA– SEMESTER –V EXAMINATION –SUMMER-2019

Subject Code:3650009

Date: 08-05-2019

Subject Name: Advanced Networking (AN)

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)** Do as directed: **07**
1. WebRTC stands for _____ and it is a collection of _____
 2. getUserMedia() is used for _____ and it has _____ parameter(s)
 3. The acronym for SDP is _____
 4. _____ is the closest API to a raw network socket in the browser.
 5. _____ offers a bidirectional communication channel over TCP/IP.
 6. The _____ enables efficient server-to-client streaming of text based event data.
 7. _____ is the technology behind AJAX that enables the client to script data transfer via JavaScript.
- (b)** Discuss Transport Layer Security (TLS) in detail. Also write in brief the three essential services offered by TLS. **07**
- Q.2 (a)** Define TCP, UDP and SCTP. Compare and contrast the following with respect to reliability, delivery, transmission, flow control and delivery control on TCP, UDP and SCTP protocols. **07**
- (b)** Discuss Cross-Origin Resource Sharing. **07**
- OR**
- (b)** Explain in brief all the high-level networking APIs, protocols and services. **07**
- Q.3 (a)** Differentiate between (any 2): **07**
1. DataChannel vs. WebSocket APIs
 2. TCP vs. UDP
 3. Congestion Avoidance vs. Congestion Control
- (b)** Explain 802.11 standards. Also discuss 802.11b standards & features. **07**
- OR**
- Q.3 (a)** Discuss WebSocket protocol. Also explain binary framing layer with diagram. **07**
- (b)** What do you mean by ubiquitous connectivity? Discuss its types. **07**
- Q.4 (a)** Discuss Server-Sent events. Also explain Event Stream protocol. **07**
- (b)** Discuss TLS Handshake protocol with suitable diagram. **07**
- OR**
- Q.4 (a)** What is Latency? Discuss its components. Briefly explain last-mile latency. **07**
- (b)** Explain chain of trust and certificate authorities w.r.t. TLS. **07**
- Q.5 (a)** Discuss Network Address Translator with suitable diagram. **07**
- (b)** Discuss STUN and TURN protocols. Also explain how ICE helps these two protocols for connectivity. **07**
- OR**
- Q.5 (a)** Discuss RFC 793 – Transmission Control Protocol. Also explain the 3-way handshaking process with suitable diagram. **07**
- (b)** Explain all the fields of transport layer security record protocol with diagram. **07**
