

Seat No.: _____

Enrolment No. _____

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

Subject Code:4649301

Date: 14-05-2019

Subject Name: Computer 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)** Explain OSI reference model with brief functionality of each layer. **07**
- (b)** Write the answer in brief.
1. Explain Local Area Network. **04**
 2. Differentiate connection-oriented and connectionless services. **03**
- Q.2 (a)** Explain coaxial cable with diagram. **07**
- (b)** Write the answer in brief.
1. Explain ARPANET. **04**
 2. Compare full-duplex and half-duplex communication. **03**
- OR**
- (b)** Write the answer in brief.
1. Differentiate multimode and single mode fiber. **04**
 2. Compare fiber optics and copper wire. **03**
- Q.3 (a)** Explain Pass band transmission. **07**
- (b)** Write the answer in brief.
1. How OFDM is better compare to FDM. **04**
 2. Calculate CRC for frame 1101011111 using Generator 10011 **03**
- OR**
- Q.3 (a)** What is framing techniques? Explain Byte stuffing with appropriate example. **07**
- (b)** Write the answer in brief.
1. What is piggybacking? **04**
 2. What is sliding window? What is the relevance of sending window? **03**
- Q.4 (a)** Explain carrier sense multiple access protocol. **07**
- (b)** Write the answer in brief.
1. Draw and explain 802.11 protocol stacks. **04**
 2. Define term TSAP and NSAP. **03**
- OR**
- Q.4 (a)** Explain hidden terminal and exposed terminal problem. How RTS and CTS help to resolve the problem? **07**
- (b)** Write the answer in brief.
1. Explain store and forward packet switching. **04**
 2. Explain optimality principle. **03**

- Q.5 (a)** Explain Distance Vector routing with count-to-infinity problem. **07**
- (b)** Write the answer in brief.
1. Compare virtual circuit and datagram networks. **04**
 2. Explain TCP connection establishment. **03**
- OR**
- Q.5 (a)** What is domain resource record? Explain DNS resource record types. **07**
- (b)** Write the answer in brief.
1. What is remote procedure call? Write the steps to make remote procedure call. **04**
 2. What is cumulative acknowledgement? Explain with appropriate example. **03**
